Partial Index

Eds criteria Echelle 5000Å/600 l/mm Dec 26/27 /91

Hα Echelle Setup Dec 28/29 /91

4500Å Echelle 600 l/mm setups Nov 26/27/91

IR-Red CASS CCD setups Nov 18/19/91 & Nov 15/16/91 + next page →

(Grating 1800 l/mm) → Far BLUE CASS CCD MAP setups Nov 7/8/91

Flexure Tests CASS CCD JAN 29/30/92

Echelle CCD Nov 28/29/91

Echelle Focus (w/wo filter) 7600Å x Grating 7200Å 8446Å 7771Å Feb ~~Mar~~ 5/6/92 Srt Observing

CASS 1800 l/mm Ruling 6450Å Feb 7/8/92

Echelle 7600Å grating MAR 21/22 (MAR 19/20) 8807Å central for KK

CASS KK 5140Å Oct Oct 27/28/91

PCS Speckle FF MAR 3-5 /92.

DAVID DUNLAP OBSERVATORY
74" Logbook
Vol. 69
Plate Nos. CC03998 — 6221
October 1991 - April 1992

1790
150
~~1940~~ ?

7870

Spectr. Temp. ..... Dome Temp./Hum. ..... +6°C Transparency Conditions .....

Focus .....6.90..... Red Comp MAPPING JUST Notes on Red Comps

Spectr. Temp. Nov. 14/15/94 Tn Dome Temp./Hum. ..... 490 0 20 1024 6 1 CCDFmT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program ~~RANGE~~	Remarks	Quality
		FeAr A=1/2		CASS CCD	G=5062 1200/	200u FULL			~~7720~~ - 8020Å	approaching saturation on lines	
		FeNe Clear			5025 1200/			3ci			
		FeAr A=1/2			5025 1200/			4ci			
	5secs	FeAr Clear			G=5035 1200/ ~~600~~			6ci;	7650-7960Å	poor line dist. 2 very strong lines saturated.	
	~~50~~ secs	FeNe Clear			"			5ci;	"	poor line distribution 8K max on main line @ red end	
	5sec	FeNe Clear			G=5225 1200/			6ci;		others @ a 2K ADU 1 line @ Red @ 10K ADU	
	10sec	FeAr A=1/2			G 5225 1200/ ~~9~~			7ci;	~~8745-8665~~	3 str lines ⇒ saturation	
	10sec	FeAr A=1/2			G=5420 1200/			8ci;		one other @ 2K ADU 1 v str ⇒ saturated Line @ Blue end	
	10sec	FeNe A=1/2			G 5420 1200/			9ci;	Very Good	one line 7000 ADU Many Lines 500-7100 ADU	
	20sec	FeNe A=1/2			5435 1200/		Range (8820-8520 8670 center)	10ci;	Very Good	To get rid of str blue line.	
	10sec	Fe Ar A=1/2						11ci;	POOR	str line @ Blue = 12K, one other @ 6000 ADU	
	20sec	TiNe A=1/2						12ci;		SAME as FeNe exp. str same	
	10sec	FeNe Clear			G=5390 1200		8415 - 8725Å 8570 center	13ci;		Fine.	
					G 5035				~~7650~~		
	10sec	TiNe Clear			1200			14ci;	7650-7960Å	1500 ADU MAX on Red Line	SAME as FeNe
		FeNe slightly stronger									

5 Continuation from Last Logbook Pg #3

Date 1991 Oct 17/18 Thurs/Fri ... Observers P.dr. J.m. [F.d.s] service

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr.
cc03998	HD42545	06 06 17	+16 09 11	03 54 27	04 12 31	00 31 E	cc03997 cc03999	Fe A Clear	60s	40 000
cc04001	HD35149	05 17 35	+03 26 54	04 20 27	04 38 28	00 44 W	cc04000 cc04002	"	"	40 000
4004	HD42545	06 06 17	+16 09 11	04 44 34	04 58 20	00 15 W	cc04003 cc04005	"	"	40 300
4007	HD83754	09 35 31	−13 52 43	05 05 16	05 45 30	02 26 E	cc04006 cc04008	"	"	30 000
cc04009	BIAS (4)					"	−14°			
4010 To 4015	FLATS x6			05 55		01 E	0° dec	Tung Clear	100s	
~~cc04016~~	~~BIAS (4)~~	not written				"	"			
4017	BIAS (4)									
4018	DARK	DARK 30. BAT						30 min		
19	"							"		
20	"							"		
21	BIAS (4)									

Spectr. Temp. ..... Dome Temp./Hum. +9.2°C 67% Transparency Conditions .. Hazy - cloudy

Focus ... 6.75

Spectr. Temp. ..... Dome Temp./Hum. +8.8°C 70% central

510 0 80 1024 21 CCDFMT
30 CGAIN CCDT → -100°C

Exp. Mtr.	Seeing	~~Pig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
40 000	3"	~~4.95~~ 4.95	B5 V	CASS CCD	G=4578 /1800/	250u 3rd longest slit	4530 Å	7ci	Fds pgm		
40 000	3"	5.00	B1 V					8ci	"		
40 300	"	4.96	B5 V					9ci	"		
30 000	5"	5.06	B5 V					10ci	"	Slightly cloudy in	
								2ci 7ci		8 000 ADU/pixel max	
						TO WORM TO CC ~~0415~~ 4021					
					All to Perseus.						

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Fri – Sat

Date 1991-10-18/19. Observers ....T.r.l/..Th.....

Fri/Sat

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC04022 fts	BIAS(4)			≈1840						
Fmooq 408.Th	HD187120	19 43.2	+45 29	18 08		0005E				
CC04024	HD7927	01 13.8 1855	+57 42	18 43 25	18 50 30	0458E	CC04023 CC04025	FeA Clear	40s	6300
CC04026	BD+57 252	01 1029	+5729 18	19 23 43	20 06 06	0342E	CC04027	"	"	1100
4028	BD+57 254	01 1036 1855	+5730 00	20 11 26	20 49 20	0259E	CC04029	"	"	715
4030	BIAS(4)			5		"	+58°			
4031	~~BD+57~~ NGC457 Pesch 3 1M			20 59 15	21 43 00	0205E	CC04032	FeA clear	40s	400
4033	NGC457 Pesch 3 5			21 46 00	22 18 00	0130E	CC04034	"	"	260
4035	BD+57 249	01 10 17 1855	+57 32 18	22 28 35	22 53 48	0054E	CC04036	"	"	549
4037	BIAS(4)					0052E	+57 32			
4039	HD 3712	00 34.8	+55 59	23 26 00	23 27 50		CC04038 CC04040	FeA Clear	40s	5300 ~~5000~~
CC04041 4046	FLATS ×6					01 E	+57°	Grating A=1/4	13s	
4047	BIAS(4)	1c1		0005						
4048 4050	DARKS	3 4 5	DARK30,BAT						30min	
4051	BIAS(4)	6								

Spectr. Temp. ..... Dome Temp./Hum. +12°c ... 64% Transparency Conditions ... s! hazy - cloudy ... 8

Focus ... 6-7.5 ... 90CGAIN CCDT @ -100°c

Spectr. Temp. ..... Dome Temp./Hum. +7.0°c ... 70% central CCOFMT 540 0 20 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CAISS CCD	G=6048 /800/562		6610Å		NGC 457 Trl pgm	$\bar{x}$ = 108.870	
	.	7.52	KO III			250µ below slit			seeing test	Dome West	
40s 6300	3.	5.0	FOIa			250µ mid slit Length		4ci	Trl pgm	clouding in	
" 1100	3"	9.51	BI IV					5ci	Trl pgm	6 cols ≃1700 ADU sum AVG above bkgnd	
" 715	5"	10.18						6ci	"	thin cloud 1000 ADU sum AVG of 5 cols above bkgnd	
							$\bar{x}$ = 106.427		σ 1.010	Dome T = +8.5°C	
40s 400	3"	11.04		≃600 ADU sum of 5 above Bkgnd.	(dbl lined?)			7ci	NGC 457 3/N	NORTH of Close (N-S) pair	
" 260	3"	11.35						8ci	Hot emmission	South one Cloud at end	
" 549	2"	9.83						9ci		some cloud CCDT -100.0°C @2250	
5300				$\bar{x}$ 106.800		1.890	Top up @		23 30	Dome T = +7.0°c	
40s ~~5300~~		2.23	KOIII a		[2nd longest slit]			10a 11ci 10ci	Std Vel	Cloud at end MAX 11K ADU/pixel	
13s											
										~~Backed up to Perseus c workon To CCO 4046~~	
30min											
										Backed up Perseus c workon TO 4051.	

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pg #1 Sat-Sun

Date 1.9.91..Oct..19.20 Observers .T.c.l./.T.n.....

Emulsion Batches:

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Peggy Tour looked at moon .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CCF00134/135	Focus	Comp/	Stellar	18 30		0 0	+10	FeA Clear	30s	Set 6.7
CC004053	BIAS(4)			18 46						
CC004054	HD187691	19 46.2	+10 10	18 5030	18 5349	00 37W	CC04052-Rb CC04055	FeA Clear	40s	5500
4057	HD 7927	01 13.8	+57 42	204907	205218	02 52E	CC04056 CC04058	"	"	5920
4059	BD+57 252	01 10 39	+	21 02 15	213350	02 10 E	CC04060	"	"	765
4062	NGC457 Pesch31S			21 45 30	22 22 11	01 21 E	CC04061 CC04063	"	"	260
4064	NGC457 Pesch31N			22 25 50	23 1414	00 30 E	CC04065	"	"	360
4066	NGC457 Pesch34			23 21 41	001040	0027E	CC04067			505
4068	BIAS (4)			27						
4069	NGC457 Pesch11			00 23 35	01 10 55	01 27W	CC04070	FeA Clear	40s	246
4071	HDE236689			01 1845	01 45 45	02 03W	CC04072	"	"	913
4073	BD+57.00243			01 55 20	02 18 00	02h 35 W	CC04074	"	"	761
4076	HD 3360	00 31 24	+53 21	022640	02 27 40	03h 27 W	CC04075 CC04077			650
4079 (4078 inc)	BD+57.00245			023822	03 02 22	03h 19 W	CC04078 CC04080			600
4081	BD+57.00246			03 0710	03 2920	03h 46 W	CC04083			635
4082	BIAS (4)									

1900

Spectr. Temp. ..... Dome Temp./Hum. +5.2°C 66% Transparency Conditions ..Part. Cloudy..... 10

Focus ... 6.75 .....

Spectr. Temp. ..... Dome Temp./Hum. +1.6°C 60% λ 90 CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Set 6.75				CASS CCD	G=6046 /1800/5612	250u mid Length	6610Å		T=+5.0°C	540 0 10 1024 8-1 CCD Format	Part of Vol
										540 0 20 1024 4-1	
5500	5"	B 5.07	F8V			250u width (3rd longest slit)		3ci	Std/Vel	CCOT = -100.3°C	
5920		V 5.00	FOIa					4ci	Trl	NGC 457 pgm	
765	5'	V 9.57	B1 IV					5ci	"		
260	4"	V 11.35				150u (2nd longest slit)		7ci	"	Slit lengthwise 1 star South of pair H&K em	
363	1'-6"	V 11.04						8ci	"	N of K one	
505	4"	V 10.61						6ci	"		
										X = 104.667	
466	4"	V 11.21						9ci	Trl pgm		
913		V 9.47	B1.5(V)pe shell					10ci	"		
761		9.48	B0.IV:e					11ci	"	emission H&K abs e H δ	
6511		3.6	B2 V					12ci	Std		
600	3"	V 7.35						13ci	Trl pgm		
635	3"	V 9.63						14ci	"		

#2

Date 1991 Oct 19/20 Observers T. C. L. Tan

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO4084	NGC 457 Peach 13			03 34 00	04 08 00	04 25 W	CCO4085	Fea clear	40s
4087	HD 26162	04° 03·3	+19 21	04 18 40	04 25 50	01 53 W	CCO4086 CCO4088		
4090	HD 46300	06h 27m 30s	7° 24' 23"	04 34 05	04 36 10	00 20 E	CCO4089 CCO4091		
4092	BIAS(4)			04 38	Tan Topup				
4093	BIAS(4)								
4095	HD 87901	10 03 03	+12 27	05 01 30	05 07 30	0	CCO4094 CCO4096		20s
4097	"	"	"	05 14 36	05 16 30	03 16 E	CCO4098		
CCO4100	HD 65583	07 59 21	+39 31 04	05 29 50	05 37 50	E	CCO4099 CCO4101	Fea clear	40s
Fmoo410	"	"	"	05 39		00 44 E	N' mode	Tutix 4	
CCO4102	BIAS(4)			05 42		"			
CCO4103 4108	FLATS	6				00 30 E	+20°	Type G H=1/4	125s
~~CCO4104~~	~~BIAS(4)~~								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0°C ... 65%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
360	3"	V 10.78		CASS CCD	1800/562°	250μ	6610Å	1Ci	Trl pgm	NGC457	
7583	4"	5.50	K1 III					15	RV Std IAU		
5900		4.5	A0 I6					16	Std	CCDT @ 0440 = -96.0	
					X = 103,006					∴ Top up commenced	
					X =					CCDT = -101.2 @ 0455	
10 000		V 1.36	B7 V					17Ci	Telluric Std	Regulus	
57000		"	"					18Ci	" "	guided 12K max	
2400	4"	7.00	G8 I					19Ci	Std Vel	Do	
39x39		"	"	4 frames					Seeing test	Focus W SW Do Wood	
										11K max ADU guided	
	All Backed up to Perseus e workm										

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Sun-moon

Date 1991 Oct. 20/21 Observers Tr1/Tr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc04109	BIAS (4)			19 50		~~3~~ 4 E			
4111	HD7927	01 13.8	+57 42	19 56 11	20 00 15	3 40 E	cc04110 cc04112	FoH CIaO	40s
4113	BD+57.252	01 10 29 (1855)	+57 29 18	20 10 50	20 32 00	3 09 E	cc04114	4	4
4115	NGC457 Fesci3IN			20 37 30	21 13 55	2 26 E	cc04116		
4117	BIAS(4)			21 17		~~2~~ 2 2E	4118		
4119	HD 3712	00 34.8	+55 59	21 26 50	21 37 17	1 34 E	4120	FoH CIaO	40s
4122	HD 3765	00 35.3	+39 40	21 43 33	21 53 35	01 08 E	4121 4123	4	4
Fmoon 4H.1	HD 3765	"	"	21 55		01 07 E		Int x4	"N" mode
4125	HD 22484	03 31.8	+00 05	22 18 20	22 23 27	3 ~~34~~ E	4124 4126	FeN	40s
cc04127	BIAS(4)					3 30 E	0° dec		
4128 4133	FLATS x6			22 40		01 E	+30°	Tung $\lambda = 1/4$	12sec
4134	BIAS(4)					4	4		
cc04135	DARK	during Top up		23 26			1200 sec		30 min

Spectr. Temp. ..... Dome Temp./Hum. 6.1°C 59% Transparency Conditions .. Some Cloud but clearing

Focus .... 6.75 .....

Spectr. Temp. ..... Dome Temp./Hum. 4.1°C 71% (central)

Some format's CCD TAS 90 CCGAin previous night

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/562	250u mid Length	6610A		G-6048		
7330		V 5.0	FOI a					20i	Trl/pyn	MAX 8100 ADU	
848	<2"	V 9.51	BIII V					21ci	"		
303	<2"	V 11.04						22ci	"		
7400	2"	V 2.23	KOIII a					23i	std vel	MAX 12K ADU	
1285	<2"	V 7.36	dK5		[below 250u slit]			24ci	std vel	Hazy - cloudy	
31x31	<2"	h	V		Dome SSW	Light sub wind			seeing test	incr cloud	
4844		E 4.55	F8V					25ci	std vel	cloud	
										MAX ADU = 18 ADU	
										CCD T = -100°C	
				Change CD, but to H Beta				but the cloudy	4780 = G setting		
					1800/				4840Å	Hβ Region	
All backed up to Perseus c 40Am to cc04135.										4940Å → 4735Å	

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Sun - mon

Date 1991 Oct 27/28 Observers (K.K.) service Tn (.TO)

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04136	BIAS(4)			18 53					
CC04138	HD199305 ✓	20 51.3	+61 50	19 05 09	19 38 09	00 51 W	CC04137 CC04139	Fento Clear	60s
4141	BD+45 3310 ✓	20 49.3	+45 44	19 48 00	20 21 25	01 35 W	CC04140 CC04142	Polle Clear	40s
4144	HD215182 BC ✓	22 38.3	+29 42	20 33 33	21 15 33	00 40 W	CC04143 4145	"	40
4146	HD215182A ✓	"	"	21 19 18	21 21 35	00 46 W	CC04147	"	"
4149	HD223094 ✓	23 41 23	+28 08 54	21 31 03	21 46 00	00 06 W	CC04148 CC04150	"	"
Fmoon412Tn	"	"	"	21 52		00 12 W	+1°90	Tn 1x4 = 1/5sec	
CC04153	BIAS(4)			21 55					
4154	BMCas ✓	00 48.6	+63 33	22 05 00	22 24 45	00 23 E	CC04152 Doc Clear +64 08 CC04155	Fento Clear	40s
4156	BIAS(4)							"	"
CC04157 62	FLATS x6			22 48	Aperture 1/2	0 0 Hr L	+5 30	T 1/4	1:30
CC04163	BIAS(4)			22 56					
4164	BIAS(4)	DARK30.BAT		23 06					
To 4167	DARKS x3								
4168	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. +11°C ... 79% Transparency Conditions .. Clearing ... NW wind 16

Focus .... 6.75 545 0'5 1034 5' CCD FMT

Spectr. Temp. ..... Dome Temp./Hum +8.8°C ... 80% 90 CGAIN CCDT → −100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/467*		5140A°		*G= 4483	$\bar{x}$ = 105 985	
2430	3"-5"	V 3.50	M2V			250u mid slit Length		5ci	As-fp-kk	bright stars 5E of pair	
2046	4"-5"	V HB 9.1 V	G8V	≈ 2600 400 Sum AVG = 7 cols above background				6ci	"	some cloud CCDT = −100°C	
700	3"-8"	a 10						7ci	"	≈ 900 400 sum AVG of 6 cols above background seeing getting v poor	
10500	8"	B 3.8	G2II-III					8ci	"		
3000	8"	V 7.45	K5III					9ci	Stellar		
55×55 pixels		"	"	4 frames	(later removed)	Below 250u Slit	(no Filters)		Seeing test	Dome SW: STRONG NE wind CCDT = −104.5°C Dome T = +9.2°C	
500	5"-8"	V 8.85-9.33			1800/46.7°	250u	5140A	10ci	(≈ 350 400 Sum AVG above)	Cloud at end	
				sights	$\bar{x}$ 103.138					CCD T = −104.8°C Dome T = 8.9°C	
								11ci 16ci		≈ 12 h IMAGE ROT (focus)	
		Focus tests @ 01 AM									
		CCF 30136/137		Comp/stellar				T=	+9.5°C	Set 6.75 right on	
		All packed up to persons and work									

17 pg 01

Mon-Tues (Bln checking) / mtn phone in

Date 1991 Oct 28/29 Observers In service for [illegible]

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4169	BIAS (4)			17 50					
4170	DARK 30	while on	Beta Cyg A	17 50	(2700 secs)		CCO4176		1800
4172	GCRV 12836	20 29.2	+65 05	18 42 40	19 27 40	01 07 W	CCO4173	FeNe Clear	40s
4174	"	"	"	19 34 50	20 19 50	01 59 W	CCO4175	"	"
4176	BIAS(4)			2022		"	+65 37		
4178	HD199305	20 51.3	+61 50	20 29 17	(1500 secs) 20 59 17	02 16 W	CCO4177 CCO4179	FeNe Clear	40s
4181	HD223094	23 41 23	+78 08 54	21 14 03	(1500 secs) 21 27 03	00 09 E	CCO4180 CCO4182	"	"
FW100041	Bln	"	"	2130	(1500 secs)	00 06 E		4x1 int	4 frames
CCO4184	BAI Cas	00 48.6	+63 33	21 43 33	22 13 33	00 31 E	CCO4183 CCO4185	FeNe Clear	40s
4186	"	"	"	22 20 00	22 35 00	00 09 E	CCO4187	"	"
4188	BIAS(4)			2237		"	+64°		
4190	HD222368	23 34.8	+05 05	22 44 33	22 45 40	01 16 W	CCO4189 CCO4191	FeNe Clear	40s
4192	DARK 15m			22 53 20					
4194	BD+25 522	03 11.4	+25 57	23 17 00	00 17 00	00 49 E	CCO4193 CCO4195	FeNe Clear	40s
4196	BIAS(4)					00 45 E	+26°		

Spectr. Temp. ..... Dome Temp./Hum. +8°C ... 72% Transparency Conditions .. Fine .....

Focus .... 6.75 FANS on of course tonight EARLY

Spectr. Temp. ..... Dome Temp./Hum. +5.7°C ... 70% FORMAT 545 0 15 1024 51

90 CGHIN CCDT → −100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=4983 1800/46.7	250 mid Length	5140Å				
832	2"	V 10.43	dM3		≃ 600 ADU	sum AVG of 4 cols above bkgrnd		11ci	Asm Sp-kk	DRA 0 0 3 DDec +0 9 6 DC c wafits) 1-11ci e eyes	
700	2-3+	"	"					12ci	" noted a faint comp 21" SE of object?		
										Dome T = +7.0°C	
2730	3"	V 8.50	M2V					13ci	Asm Sp-kk	DRA -0 0 5 DDec +0 3 1 8 brightest SE of Pair [area for SE=]	
4300	2-3"	V 7.45	K5III		[Below 250 slit]			14ci	std Vel		
31+?jpeds		"	"	Dome SW Light East house				15ci	seeing test	Bright Aurora Too (illuminating slit)	
1700	2-4"	V 8.82-9.83							ODD cosmic rain? all cols	Vel DC ≃ 20 on 1 pix wing blend, 5 on 5 cols	
800	11	"						16ci			
									CCDT = −13.6°C	Dome T = +6.5°C	
4500		B 4.68	F7V					1ci	std Vel		
								17c.			
400	4"	10.1 −12.8	M0					18c.	Asm Sp-kk	Looks like Forbes Lines @ ≃ 5200 Å (Mg I)	
										Dome T 5.8°C	

17 19 pg #2 Mon - Tues 1800 2000

Date 1.9.91 Oct 28/29 Observers T.H

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCO4198 fts	DM+53935	05 33.2	+53 26	00 38 00	01 14 00	2 16 E	CCO4197 CCO4199	FeNe Clear	40s
4200	" (SW one)			01 18 00	012400	E	CCO4201	"	"
4202	BIAS(4)			0142		0 0	+19°		
4203 4208	FLATS x6					"	"	Fume H=1/2	
4209	BIAS(4)					"	"		
4211	HD 26965C	04 10.7	-7 49	02 09 00	022900	0 25 W	CCO4212	FeA Clear	60s
4213 4218	FLATS x6		"			0035W	-8°	Fume H=1/2	11s
4219	BIAS(4)								
4220	HD 26965B	04 10.7	-7 49	0245	07 58	0 54 W	CCO4221	FeA Clear	60s
4223	~~M11 C560~~	07 31 01	-7 32 12	0306	03 15 57	01 58 E	CCO4223 CCO4224	"	"
4225	M11 C560	"	"	0321	033950	01 43 E	CCO4226	"	"
CCO4227	Bias (4)			0440					
4228 4230	DARKS 30m	x3	DARK 30. BIAT						
4231	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. +5.5°C 71% Transparency Conditions .. Part. Cloudy
Focus ... 6.75 [indeed it is I checked it] Strong Aurora Flushing South of Zenith
Spectr. Temp. ..... Dome Temp./Hum. +5.0°C 76% Control

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1165	3"	V 9.78	dm2	CASS CCD	1800/4687	350 mid length	5140Å	19ci	Asm Sp KK	Fainter and NE of pair Aurora illuminating slit	
"					"	"	"	20ci	Note On nov 9/90, I drew Fld showing Brt comp as same things as DM153935		no tool on C4RD to
								Dome	T = +5.2°C	CCDT = -100d°C	
						350 Longest	5140Å			12K MAX/pixel	
200	4"	V 11.15d	DM42		1200/564	350 Long slit	C=6048° 6610Å	21ci	Asm Sp KK	Cloud North of faint pair	
	3"	V ~~9.52~~	DA		"		"		"	10 k max/pixel, Dome T = +5.1°C	
104	3"	V 9.52	DA					22ci	Asm Sp KK	Cloudy	
490	3"	V ~~9~~		(a rosy star · Prob one to SW of mine 560 (Prob = mine 84n)				23ci	Nikon	part cloudy	
97	4"	V ~9		(Indeed, It is correct now)				24ci	"	" t. mostly	
							Should	Now 5	(-10Å line shift on sky) gone more	blue of mine Tc	
				Rolled up +6425 on				Perseus		Part	
				EEV Com tests taken in →			Tal	5 (twins)			
								15			

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pg#1 Tues-Wed [Fds] service

Date 1991 Oct 29/30 Observers ..T.n.....mk.. phoning in/Tol here too in 24" dome

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4232	BIAS(4)			2027					
CC04233	PHR K 30m	[During Focus on HI	EEV CAM Tests	2028					
4234	DHR K 30m		beRIO]	2135					
Fim0004 4235 Tn	HD223091	234123	+280854	2206		0035W	+20°	'N' mode	
CC04236	"	"	"	221430	222630	0055W	CC04235 CC04237 +3°	FeA Clear	60s
4239	BIAS(4)						CC04238	FeA	
CC04240	HD35149	051735	+032654	225300	233300	0335E	CC04241 CC04242	Clear	60s
4243	HD42545	060617	+160911	234233	000933	0348E	CC04244 CC04245	"	"
CC04246	HD35149	051735	+032654	001730	004330	0224E	4247	"	"
CC04248	BIAS(4)					0220E	+03 31		
4250	HD42545	060617	+160911	010252	012452	0232E	CC04249 CC04251	FeA Clear	60s
4253	HD35149	051735	+032654	013016	015400	0114E	CC04252 CC04254	"	"
4256	HD42545	060617	+160911	020230	022430	0132E	CC04255 CC04257	"	"
4258	BIAS(4)			0228		0128E	+16°		
4260	HD35149	051735	+032654	023330	024508	0033E	CC04259 4261	FeA Clear	60s

Spectr. Temp
Focus...6
Spectr. Tem

Exp. Mr.	
4060	
*	

Spectr. Temp. ..... Dome Temp./Hum. +6°C 70% Transparency Conditions ..Poor..Cloudy.....

Focus ...6.75.....

Spectr. Temp. ..... Dome Temp./Hum. ..... 510 0 80 1074 7 1 CCOFINT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (control)	P.H.	Program	Remarks	Quality
					G=4578 1800/	25μ	4530H°			30CGAIN CCDT→-100°C	
31×31 pixels		(4× Integration = 1/15sec)				25μ (below slit)			Seeing Test	Strong NE wind Dome SW	
4000	3"	V 7.45	K5III			250 midlength		6ci	std vel		
									Dome T = +5.4°C	$\bar{x}$ = 161.535	
* 35,200	4"-6"	V 5:00	B1 V					7ci	Fds pgm	Some cloud To focus=2765 (more exp towards end of exp *)	
37700	3"-5"	V 4.95	B5 V					~~5ci~~	"	(DV hazy during exp)	
40,000	3"	V 5.00	B1 V					9ci	"	DC used start on 9ci	
						CCDT = -100.3°C		$\bar{x}$ = 170.342		Dome T = +4.0°C	
39000	3"-5"	V 4.95	B5 V					10ci	Fds-pgm		
40000	"	V 5:00	B1 V					8ci	"		
34800	"	V 4.95	B5 V					11ci	"	some haze/fog	
					$\bar{x}$ = 17+.220					Dome T = +3.8	
10,500	4"	V 5.00	B1 V					12ci		cloud	

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pg #2

Date 1991 Oct 29/30 Observers T.T. Jon. [F.d.S.]

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4262	BIAS(4)			0249		00 19E	+3 32		
4263 4268	FLATS x6			0255		200	+3 32	TUNG clear	110s
4269	BIAS(4)					0 0	+3 32		

Spectr. Temp. ..... Dome Temp./Hum. +3.8°C 79% Transparency Conditions .. Foggy ish .....

Focus .... 6.7.5 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/	250μ	4530				
						250μ Longest Slit		3 ci 8 ci		MAX 9K/pixel	
							CCD T=-100±3°C			171-929 (a. 5.6. F=1.05)	
				All to Perseus & Worm							

Gather Exp

Wed-Thurs — Shon checking in

Date 1991 Oct 30/31 .... Observers ..[Fds] .... T.h. .....

Emulsion Batches: .....

EEV Camera used - good slit magnif. focus from .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4270	BIAS(4)			17 52		00 40 W	+28°		
4272	HD187691	19 46·2	+10 10	18 17 11 (180sec)	18 20 11	00 47 W	CCD4271 CCD4273	Foil Clear	60sec
4274	DARK 20 min			18 28					
From 4275, Tn	HD215182 BC			19 10					
CCD4276	HD215182 A on 250μ slit			19 16 18			CCD4275 CCD4277	Foil Clear	60s
From 4276 Tn	HD215182A on 250μ slit			19 14 18	19 18 30	01 06 E			
4278	BIAS(4)			19 22.		n	+30 12		
→ 4279 4284	FLATS x6			19 34		0 0	+01° Dec		
4285	BIAS (A)			19 56		0 0	01°		
CCF00138/139	Focus Test [Comp/stellar hartmann]			~~23 30~~		0 0	H4 Comp posn	T. Ne Clear	180 150
CCD04286	T. Ne Flat			23 49		0 0	H4 Comp posn.	T. Ne Clear	60s
4287	" "					0 0	"	"	"
4288	" "					0 0	"	"	"

Spectr. Temp. ..... Dome Temp./Hum. +9.8°C 49% Transparency Conditions ..Clouding in.....

Focus ... G.75.....

Spectr. Temp. ..... Dome Temp./Hum. .....

30 CCGAIN 510 0 810 1024 2 1 CCDPMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/43.1	250μ mid Length	4530Å		CCDT = -101.9°C	σ = 1.209 x̄ 169.237 data Histo's	
6230	2"	B 5.7	F8V					·	Stellar	≈ 1,400 ADU sum AVG of 10 cols above bkgnd.	
								4ci	Asm Sp kk	Image on Slit of PAIR	
31 x 31 pixels						250μ below Slit				EEV CAMERA NO Integration Yet	
39 x 39 pixels	2"					250μ on Slit (mid Length)		5ci			
34000								5ci	Asm Sp-kk		
										Dome T = +9.3°C	
								6ci 11ci		MAX 11K/pixel	
									σ = 0.888 x̄ = 169.019	Dome T = +9.0°C	
+6° N	Dome T =	+8.4 - Set 675			G4578 1800/43.1	250μ Short Slit	4530Å	1ci 2ci	Focus Test	±TiNe map cgs	
	Stellar	Slight Hg Blue Shift ≈ 1 pixel							540 0 10	1024 8 1 CCDPMT	
+6° N					G=4700 1800/		4700Å	2ci			
"					G=4770 1800/		4800Å	1ci	Gain = 0 default for reboot		
"					G4578 1800/43.1°		4530Å	3ci			
				All to Perseus and WORM.							

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Thurs – Fri

Date 1991 Oct 31/Nov 1 Observers B.H. / J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO 4289	BIAS (4)								
4291	HD 188001	19 47.9	+18 25	18 22 27	18 36 50	01 06 W	CCO 4290 CCO 4292	FeA Clear	60s
4294	HD 186980	19 42.4	+31 52	18 45 50	19 27 44	W	CCO 4293 CCO 4295	"	"
4296 4301	FLATS x6 for 1200Å			19 46		02 20 W	+32°	TUNG Clear	37 10 sec
4302	BIAS (4)			19 55		02 31 W	"		
4304	HD 186980	19 42.4	+31 52	20 14	20 27 27	03 03 W	CCO 4303 CCO 4305	FeA Clear	14c; 60s
4306	BIAS (4)								
4307 4312	FLATS x6 for 4620Å							TUNG Clear	70 sec
CCO 4314	HD 5005	00 47.0	+56 05	21 27 14 21 27 14	22 23 14	00 07 E	4313 4315	FeA Clear	60s
FM CCO 4317	TH "	"	"	22 19	+2 stars to South	3 frames			
4316	"	"	"	22 27 00	22 41 00	00 11 W	CCO 4317 ffts +57°	"	"
4318	BIAS (4)			22 47		00 00			
4320	HD 108	00 00.9	+63 07	22 53 20	23 18 20	01 35 W	CCO 4319 CCO 4321	FeA Clear	60s
4323	HD 15137	02 21.2	+52 06	23 32 30	00 03 30	00 03 E	CCO 4322 CCO 4324	"	"
4326	HD 17505	02 43.4	+60 01	00 11 00	00 31 00	00 03 W	CCO 4325 CCO 4327	"	"

Spectr. Temp. ..... Dome Temp./Hum. +9°C ... 55% Transparency Conditions ... Fine .....

Focus .. 6:75 .... should be ok note we through we were @ 90CGAIN till 22EST.

Spectr. Temp. ..... for 600l/mm grating Dome Temp./Hum. ..... central

~~90~~ CGAIN All night CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
				CASS CCD	* 600/	250u mid length	4200Å	x̄ =	σ 0985 165.490	* G = 2600 3900 - 4500 Angst Range	
21,000	2-3"	B 6.24	07.5 I or f					3ci	Ostar-Bln	* 70K elec. over 10 cols. SUM 5200 ADU MAX/pixel	
21,700	2"	B 7.53	07.5 III (CF))					5ci	"		
						Full Length		7ci 12ci		10K max / pixel	
										Dome T = +7.8°C	
5000	3"	B 7.52	07.5 III (CF)		* 600/	250u	4620Å	15ci	Ostar Bln	* RIGHTON G = 2657 (H β to in)	
					"		"				
					"	250u Full Length		17ci 22ci	[CCDTEMP] at	540 0 50 1000 2 1 FOR 3200 in test H alpha = 6620Å	
10,730	<2"	B 7.85	065 V		* G 600/	250u mid length	4250Å	22ci	Ostar Bln	* G = 2610 for Tidal setting	
	<2"	"	"			250u slit			EEV Camera	Nice Slit View	K 30 pts total
3000	<2"	"	"					23ci	Ostar Bln	[~10K pictures desired]	[Standard]
										Dome T = +6.7°C	
10,000	1.5"	B 7.58	06 f? pe					24ci	Ostar Bln		
9000	2"	B 7.7	09.5 III-III(n) Vak					25ci	"		
	<2"	B 7.46	065 V (CF)					26ci	"		

pg 2 of 2

Date 1991 Oct 31/Nov 1 Observers T.A., for R.K.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04328	fts BIHS(4)				x50 1200sec	0035W	+4130		
4330	HD14633	02 16.7	+41 02	00 37 50	00 57 50	0058 W	CC04329 CC04331	FeAr Clear	60sec
4333	HD34656	05 14.0	+37 20	01 04 00	01 16 00	01 41 E	4332 4334		
4335	BIHS(4)					"	+37°		
4336 4341	FLATS x6					0 0	+4° dec	FeAr Clear	40sec
CC04340/141	Hartmann	Comp/	Hartmann Stellar			0 0	+4°	FeAr Clear	
CC04342	BIHS(4)	Lt				0 0	plate focus		
CC 4343	DARK 30m	3Ci (Left Running)			0225				

Spectr. Temp
Focus ...6
Spectr. Tem

Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. +6.3°C 74% Transparency Conditions .. Sl. hazy .... S.L. fog coming.

Focus ... 6.75 still .....

Spectr. Temp. ..... Dome Temp./Hum. +6.0°C ... 77 %

560 0 50 1024 21 CCOFOIT

30 CCAM STILL

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600/	250μ mid length		~~27c~~	~~Ostar Pln~~	$\bar{x}$ - 1.160 161.504 on 3 of 4 shots	
~10K	2-3"	R 7.26	ON 8V				4250Å	27c;	Ostar Pln		
8700	2"	B 6.81	OTII (f)					28c;	"		
								CCD T=-101.9°C		Desire T=160°C 162.0 Å ~ 0.335	
						250μ Longest slit	"	6c; 11c;		~10K no. 404 [illegible]	
							OVERCAST		BY 01:30. very fast.		
Set 6.75		T=5.8°C				250μ short		1c; 2c;	550 0	2 1024 8 1 COFOIT	
$\bar{x}$: 161.343				All Backed up to			PRESENT WORKING TO CCF 0014.FTS				
							& TO	CCD4343 -		Also exp. 4 to to CCD4343	

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pg #1 Thurs-Fri

Date 1991 Nov. 7/8 Observers ~~BH~~ /T.m

Emulsion Batches:

Note Diffuser in as normal for all sources

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00142/143	Focus Test			19 13		0 0	+10°	FeNe Clear	1.20/1.40
CC04344	FeNe			19 32				FeNe Clear	60s
4345	FeAr							FeAr Clear	60s
4346	TiNe							TiNe Clear	50s
4347	TiNe							TiNe Clear	60s
4348	FeAr							FeAr Clear	60
4349	FeNe							FeNe Clear	60
4350	FeNe			20 20				h	300s 600s
4351	FeAr							FeAr Clear	60s
4352	TiNe							TiNe Clear	60s
4353	TiNe			20 35				TiNe Clear	60s
4354	FeNe							FeNe Clear	200s
4355	FeAr							FeAr Clear	60s
4356	FeAr							FeAr Clear	60s
4357	FeNe							FeNe Clear	60s
4358	TiNe							TiNe Clear	120 s

Spectr. Temp. ..... Dome Temp./Hum. 0.°C ..... 71% Transparency Conditions ... Mostly cloudy .....

Focus ..... 6.75 → 6.90 after 1st Focus Test

Spectr. Temp. ..... Dome Temp./Hum. ..... (central)

90 c gain
550 0 15 1024 61 CCDFinT
* CCDT → −100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	P.H.	Program	"G" wavelength Range	Remarks	Quality
~~6000~~				CASS CCD	1800/45.5°	250u mid length		1ci/2ci	Dome T: −00c Comp Maps	4370 ~~4840~~	stellar shift Blue 1 pixel	
9000				"	"	"	4930	4ci	Comp MAP	4840	4825–5075	1500
1900					"			5ci	"	"		1700
8470					"			6ci	"	"		2800
8600					1800/		4750	7ci		4720	4650 – ~~4855~~ 5	1500
1900							"	8ci		~~4720~~ 20	4650 – 4855	2000
9000	(60 secs too weak)						"	9ci		4720	" "	2000
~~55000~~ 5000	(note 60s too weak here)				1800/43.3		~~4570~~ 4590	10ci		4600	cluttered and too weak	500
							4570Å	11ci		4600	4465 – 4670	1300
							4570Å	12ci		4600	4465 – 4670	1500
					1800/42.2		4390Å	13ci		4480	4290 – 4495	400
38000	(FeNe Fine of this Range)						"	14ci		4480	"	7000
							"	15ci		4480	"	700
					1800/41.9		4190	16ci		4350	~~40~~ 75 → 4300	1000
	Blue end weak } for 180 secs needed				for both and	FeNe TiNe	"	17.			~~40~~ 75 → 4300	700
							"	18ci			"	~~2~~ 900

33 pg #2

Date 1991 Nov 7/8 ..... Observers ... T.N. .....

Emulsion Batches:
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.....
.....

Spectr. Temp
Focus 6
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
CC 64359	FeNe			21 50		0 0	+10°	FeNe Clear	60sec	
4360	FeAr							FeAr Clear	60s	1910
4361	TiNe							TiNe Clear	60s	
4362	TiNe							TiNe Clear	120sec	1700
4363	FeNe							FeNe Clear	120sec	
4364	FeAr							FeAr Clear	120s	1700
4365	FeAr							"	120sec	1700
4366	FeNe							FeNe Clear	120sec	
4367	TiNe			22 34				TiNe Clear	120sec	
4368	TiNe							"	"	
4369	FeAr							FeAr Clear	"	
4370	FeNe							FeNe Clear	60sec	1700
CCF00144/145	Focus Test in Blue			22 52		0 0	+24°	"	60/60	
CCF00146/147	Focus Test @ 4610 Å			23 10		0 0	+24°			

Spectr. Temp. ..... Dome Temp./Hum. -101°C ... 71% Transparency Conditions 34

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... central

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	#4 G #7	Remarks	Quality
~~8900~~	~~(coverage)~~ (good coverage)			HS CCD	1800/40° *	25μ mid Length	~~3965Å~~ 3960Å	19ci	Comp imgs	4225	4105 - ~~4005~~ 4105	1300 ~~1400~~
1910					"		4000Å	20ci		4225	- 4105	450
	Red end weak				"			21ci		4225	4105	800
17000	Red end weak				1800/		3815Å	22ci		4105	- 3990	700
	good coverage							23ci		4105		8000
3,700	~~good~~ coverage							24ci		4105		1400
3700	OK				1800/		~~3630~~ 3630Å	25ci		3990		1700
	(many line 1000-2000Å)							26ci		"		8000
		good coverage						27ci	CCD T = -101.8°C	"		1000
					1800/36.8		~~3460~~ 3460Å	28ci		3880		1200
								29ci				600
9800		good coverage						30ci				1300
	Focus Set = 6.90				1800/36.8		~~3460Å~~ 3460Å	31/32	~~Set~~ Focus Test		T = -1.7°C	
									Stellar Blue by < .5 pixel			
					1800/43.7		4810Å	33/34	stellar v sl Red		T = -2.0°C	

33 35

pg # 3

Emulsion Batches: .....

Date 1991 Nov 7/8 ..... Observers [mkj] TG ....

Time within 2 secs of Astro. clock ... No. WWV Time tonight

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Spectr. Temp. Exp Mtr	Sec
C 4371	OHRK			23 20		0 0	light from CCO4372				
4373	HD 224484	03 31.8		23 46 32	23 50 00	00 57 E	CCO4374	Fe Ar Clear	60s	9000	3
4375	BIHS(4)	(while on MWC560)		00 21							
4377	MWC 560	07 21 01	-07 32 12	x50 00 28 40	00 48 40	03 47 E	CCO4376 CCO4378	Fe Ar Clear	60s	146	6
4379	"	"	"	x50 00 58 10	01 28 10	03 07 E	CCO4380	"	"	250	"
4381	"	"	"	01 36 18	02 06 25	02 30 E	CCO4382	"	"	400	8
	~~BIHS(4)~~										
4383	BIHS(4)					0 0	-	TUNG	10		
CCO4384 4389	FLATS x6					0 0	-15°	TUNG Clear	10s		
4390	BIHS(4)										
C											
C											

Spectr. Temp. ..... Dome Temp./Hum. ...-4°C...69% Transparency Conditions ...S.l..hazy.....

Focus ....6:90.....

Spectr. Temp. ..... Dome Temp./Hum. -5°C...66% (central?) still@ 550 0 15 1024 6 1 CCDFmT Topup complete by 23EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD				35c;			
9000	3"	B 4.85	F8V		1800/	250u 2nd longest slit	4810A	~~36~~ 37c;	Std/vel	G=~~1760~~ 3400 HKM max	
										Dome T = -4.3°C	
146	6"-10"							37c;	M3Ki gain	H Peak 80 ADU above background barely visible with EEV camera	
290	"							38c;	"		
400	8"							39c;	"		
										Focus Tests to perseus & WORM	
										$\bar{x}$ 89.143 σ 0.977 ~~103.147~~	
						250 Longest Slit		40c; 45c;		CCDT = -101.9°C	
										Dome T = -4.7°C	
				All now to Perseus & WORM,							

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pg #1 Fri-Sat

Date Nov. 8/9. 1991 Observers R.G./Ts

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4391	BIAS(4)			~17 50		00 48E	-9 44	Fe Ar Clear	60sec
4393	HD 204848	21 262	-10 11	17 57 30	18 27 30	00 11E	CCD4392 CCD4394	"	"
~~4396~~	~~HD STAR TO SW of~~	~~LOST wrong way~~		~~18 42 56~~	~~18 52 56~~	~~01 42 5E~~	CCD4395 CCD4397	"	"
4398	HD 221170	23 246	+29 33	18 01 28	19 23 28	01 12 5E	CCD4399	"	"
4400	BIAS(4)	(Clock HD Cat and rGs Cable)				0 0	+10°		
4401 4406	FLATS x6					"	"	TUNG Clear	3 sec
4407 4412	FLATS x6			19 46		00 10W		TUNG Clear	40s
4413	BIAS(4)					"	+10°		
4415	HD 204848	21 262	-10 11	20 02 00	20 32 00	01 54W	CCD4414 CCD4416	Fe Ar Clear	60s
~~4418~~	~~"~~	~~"~~	~~"~~	~~20 37 38~~	~~21 07 38~~	~~02 30W~~	4417 CCD4418	"	"
4419	HD 204848	21 262	-10 11	21 14 00	21 38 00	03 01W	CCD4420	"	"
4421	BIAS(4)			21 41		"	-9 43		
4423	HD 221170	23 246	+29 33	21 51 30	22 21 30	01 46W	CCD4422 4424	Fe Ar Clear	60s
4426	HD 26162	04 03 3	+19 21	22 36 20	22 46 20	0 28 E	4425 ~~4427~~	"	"
4428	BIAS(4)			22 50		0 0	+10°		

Spectr. Temp. ..... Dome Temp./Hum. 0°C 55% Transparency Conditions ... Fine

Focus ... 6:90

Spectr. Temp. ..... Dome Temp./Hum. .....

very Fine Red Aurora Hz Lines
CCDT → −100°C area
90 CCGAIN Sure formats Previous range

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/ *	250 (middle length To Long)		$\bar{x}$=	87.938	Dome T = −1°C	
6850	5"	B 8.5	K3V Fe-4	CH+1	"	"	4190-4400Å	3ci	rG pgm	* G = 4415 ± 1000 ASU SIGMA 4415 OVER the formula V = 3.05 ≈ 200 ADU sum 4415 of 3 times background Start To Slew on rG comp fill	
4600	4"	V ≈9.5	SP Looks similar to previous one				"	~~4ci~~			
6700	4"	B 8.74	KO II Fe-3				"	~~4~~ci	rG std	Fld checks and 1950 coords	
										Dome T = −2°C	
						250 Full Length		5ci 10ci		9K MAX ADU	
					1800/ *	"	4155-4365	11ci 16ci	range error.	* G4395 11K max ADU	
							"	~~18ci~~	$\bar{x}$ 89.667	G4395 Dome $\bar{T}$ = −2.0°C	
6500	3"	B 8.5	K3V Fe-4	G14+1		250a (2nd Longest)	"	18ci	rG pgm	G4395 (Std w/ Focus set G=340)	
5600	3"-5"	"	"	"	1800/ *	"	4010-4218	~~21ci~~	"	G4300 Last Spec Type ?	
4700	3"-6"	"	"	"	"	"	"	22ci	" [a small Full Sum 4 mode]	" CCDT = −12.9°C	
			→ (OII emission @ 4045 Å (Full Slit)			site lights?	red of Fellas)	Aurora? ~~No~~		Dome T = −3.2°C	
9020	4"	B 8.74 V 5.50	KO II Fe-3		1800/		4610-4218	35ci	rG std	Aurora here (Green noise)	
M500	4"		K1 II				"	29ci	Std tel	≈ 1600 ADU above background Sum #15	
									Dome T =	−3.5°C	

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pg #2

Date 1991 Dec 8/9 Observers MKL/TA

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
CCO 4429 CCO 4434	Flats x6			2259		0 0	+10°	TUNG CLEAR	75s	
4435	BIAS (4)			2313		"	"			
4437	MWC 560	072101	-073212	235750	002750	04 04E	CCO4436 CCO4438	FeAr CLEAR	60s	180
4440	"	"	"	005024	012024	03 11E	CCO4439 CCO4941	"	"	210
4442	"	"	"	012826	015826	02 33E	CCO4443	"	"	420
4444	"	"	"	020400	023420	01 56E	CCO4445	"	"	300
4446	"	"	"	024146	031146	01 18E	CCO4447	"	"	240
4448	BIAS (4)	"	"	031635						
4449	MWC 560	"	"	031638	034640	00 44E	CCO4450	FeAr CLEAR	60s	300
4451	"	"	"	035151	042151	00 09E	CCO4452	"	"	180
4453	"	"	"	042624	045024	00 20W	CCO4454	"	"	300
4455	BIAS (4)			0454		"	-7°40			
4456 4461	FLATS x6			0506		00 20E	-7 40	TUNG CLEAR	10sec	
4462	BIAS (4)					"	"			
	DARK30.BAT loaded @ 0542									

Spectr. Temp. ..... Dome Temp./Hum. -3.5°C 59% Transparency Conditions ..... Fine - slc cloudy

Focus ..6.90.....

Spectr. Temp. ..... Dome Temp./Hum. -4.5°C 60% Range wavelength

CCD Fmt 550 0 15 1024 61

Aurora still strong greenish white now and well S of zenith.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/40.7	250u longest	4010-4218	24c; 34c;		G = 4760 ≈ 12K max/pixel	
		maybe just starting to warm up					CCDT: -100.0°		$\bar{x}$ = 90.143 σ 0.707	Dome T = -3.6°C	
180	8"				1800/ 2nd longest	250u	4010-4218 11 central	25c;	Aurora strong on slit MK1 pgm	Drifts strongly one way to the other	
215	8"				1800/	25" 2nd longest	4810Å	25c;	"	G = 4760	
430	5"				"		"	25c;	"		
≈500	4"						"	28c;	"		
480	4"						"	25c;	"		
					$\bar{x}$ = 86.667 σ = 1.000		"	30c;	"	Dome T = -4.1°C	
500	4"-6"							30c;	"		
560	"							32c;	"		
360	"							32c;	"	cloud	
								$\bar{x}$ = 88.875		Dome T = -4.5°C	
								6c; 11c;		MAX Atc/pixel = 11 K	
		All to Peterson & Wolff						$\bar{x}$	90.533	CCD T = -100.3°C	

41 Pg #1 Sat-Sun

Times from operating AC perhaps behind WWV Time by only 1 sec, Tonight

Date Nov. 9/10/91 Observers [H.dy] ... Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC 04463	BIAS (4)	Batch	Started	05 42 AM Nov 9						
04464 04466	DARKS x3								30m	
04467	BIAS (4)									
CC 04468	DARK 2 mins			17 32						
4469	BIAS (4)			17 46						
4470	Comp							FeA clear	120s	
CC04471	HD197433	20 38·6	+75 14	18 01 33	18 08 33					340
4472	"			18 08 44	18 15 44					340
4473	"			18 15 54	18 22 54	00 43W				360
4474	"			18 23 00	18 30 00					300
4475	"			18 30 10	18 30 10			420 OBS		120
4476	"			18 37 30	18 44 40			420 OBS		250
4477	"			18 44 55	18 51 55					240
4478	Comp		exp during (422) clock out again					FeAr clear	120s	
4479	FLAT			18 58				TUNG Ap = 1/4	18sec	

Spectr. Tem
Focus ... 6
Spectr. Tem

Spectr. Temp. ..... Dome Temp./Hum. 0°C ..... 62% Transparency Conditions ... Fine .....

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 C GAINS All Format same as previous night.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					~~CASS~~ CCD	~~200u~~ Full Length		1ci			
								3 4 5			
								6ci			
				CASS CCD	~~CASS~~ CCD	200u Full Length		7ci	ie CCD FMT 550 0 1 5 1024 G1		
					1800		5875Å		CCDT=-101.3°	*G=5505 0°C Dome	
9600 cal		V	[G5 V					8ci	(Started Run with Tel on East side)		
2400	3"-4"	7.3 -7.7	+K0 V +K5 V]					9ci	Hdy pgm	for 3 cols 5k ADU sum AVG above background	
2400								10ci	All central guided below ▽ on slit head		
2560								11ci			
2800								12ci			
3100								13ci			
3150								14ci			
2900								15ci			
								16ci			
						200u Full Length		17ci	The old gradation problem with long slits		
									12K MAX in Red Field		

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pg #2

Date 1991 Nov 9/10 Observers [Hdg.] ... Tu ...

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC04480	BIAS(4)									
4481	HD 197433			190154	190854	0130W				2300
4482	"			190910	191610					2500
4483	"			191620	192320					2700
4484	"			192330	193030			420	OBS	2500
4485	"			193100	193800					6580
4486	"			193830	194530	0206W		420	OBS	2750
4487	"			194547	195247			"		2750
4488	Comp						For Clear	120	OBS	
4489	BIAS(4)									
4490	FLAT						Tung A-1/4		18sec	
4491	HD 197433	20 38·6	+75 14	200300	201020					2400
4492	"			201040	201740					2400
4493	"			201800	202500			420	OBS	2850
4494	"			202540	203240			420	OBS	2850

Spectr. Tem
Focus ... 6
Spectr. Tem

Spectr. Temp. ..... Dome Temp./Hum. -0.5°C 64% Transparency Conditions .. Fine - no Aurora Yet ...

Focus ....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Central	P.H.	Program	Remarks	Quality
				CASS CCD	G=5505 1800/51.6	200u Full Length	5875Å	~~1~~ 1Ci			
2300								18Ci	Hdy pgm		
2500								19Ci			
2700	4"							20Ci			
2500								21Ci			
2580								22Ci			
2750								23Ci			
2800	3"							24Ci			
								25Ci			
								~~26Ci~~		Dome T = -00.6°C	
								26Ci		16K 40U/pixel max	
2400								27Ci			
2400								28Ci			
2350	4"							29Ci			
2350								30Ci			

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pg #3

Date 1.9.91. Nov. 9/10.... Observers Mki... T.n... ~~Mrtn~~ [Hdg.]

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
CCO 4495 ✓	HO 197 433	20 38·6	+75 14	20 33 14	20 40 14	03 01 W	75 27 12 encoder	420	OBS	0150
4496 ✓	"			20 40 50	20 47 50				420	
4497 ✓	"			20 48 44	20 55 44				420	1760
4498 ✓	"			20 57 05	21 04 05				420	1960
4499 ✓	Comp							Fe Ar+ Clear	120	
4500 ✓	~~BIAS(4)~~ FLAT			21 10				TUNG Ap=1/4	20s	
4501 ✓	BIAS(4)			21 12						
4502 ✓	HO 197 433	20 38·6	+75 14	21 14 22	21 21 22				420	1710
4503 ✓	"			21 22 20	21 29 20				420	2130
4504 ✓				21 29 36	21 36 36				420	2340
4505 ✓				21 36 50	21 43 50				420	2500
4506 ✓				21 44 08	21 51 08				420	2300
4507 ✓				21 51 20	21 58 20				420	2110
4508 ✓				21 58 40	22 05 40				420	2500
4509				220613	22 13 13	04 34 W			420	2350

Spectr. Tem
Focus... 6
Spectr. Tem

Spectr. Temp. ..... Dome Temp./Hum. -1.1° 65.5% Transparency Conditions ....Fine.....

Focus ....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
2150	3"-5"	V 7.3 7.7	G5V +K0V +K5V	CASS CCD	1800/	200μ (Full Length)	5875Å	32ci	Hdg VWCep	5777Å → 5975Å	
"	"							18ci			
1760	"							19ci			
1960	3"							20ci			
								21ci			
								22ci		12 Kmag (Looks OK) Done T- -1.4°	
1900	3"							23ci			
2130								24ci			
2040	3"							25ci			
2200								26ci			
2300	2"-3"							27ci			
2440	3"							28ci			
2500	2"-5"							19ci			
2550								20ci			

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pg #4

Emulsion Batches:

Date 1991 Nov 9/10 Observers [Hdy] ... T.a./.m.ki....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04510	Comp							FeAr Clear	120s
4511	BIAS(4)								
4512	FLAT							TUNG A=1/4	20s
4513	HD197433	20 38·6	+75 14	22 19 17	22 26 17	04 47W		[illegible]	420
4514	"			22 26 40	22 33 40				420
4515				22 33 50	22 40 50				420
16				22 41 00	22 48 00				420
17				22 48 08	22 55 08				420
18				22 55 16	23 02 16				420
CC04519	Comp			2303				FeAr Clear	120
4520	BIAS(4)								
4521	FLAT							TUNG A=1/4	20s
CC04522	HD197433			23 09	23 16 55		420 OBS.		
4523	"			23 17 50	23 24 50				
4524	"			23 25 20	23 32 20				

Spectr. Temp. ..... Dome Temp./Hum. -1.9°C....68.4% Transparency Conditions ....Fine.....

Focus ..6.9.0.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/	200u Full Length	5875	21ci			
								~~20~~		Dome T = -1.9°C	
								22ci		12K max Looks OK	
2300.	3"-5"	V 7.3 -7.7	G&K					23ci	Hdelta gm VW	Cep rmdt = 12290	
2200								24ci			
2300								25			
2340								26			
2390								27			
2230								28			
								29ci			
										Dome T = -2.1°C	
								30ci			
2010								18ci			
								19ci			
1900.								20ci			

49 Pg #5

Emulsion Batches:

Date 1.9.91 Dec. 9/10 Observers [Hdg] W.K. / T.H.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC04525	HD197433			23 32 30	23 39 30					2m
CC04526	"			23 39 40	23 46 40					1m
04527	"			23 46 49	23 53 49					1m
04528	"			23 53 57	00 00 57					1m
04529	"			00 01 08	00 08 08					1m
04530	"			00 08 16	00 15 16					
04531	Comp.							FeAr CLEAR	120s	
4532	BIAS. BAT	BIAS(4)								
4533	FLAT			~~00 24 05~~				TUNG A=1/4	20s	
4534	HD197433			00 24 05	00 31 05			420	sec	730
4535	"			00 33 40	00 40 40			420	sec	1500
4536	"			00 41 14	00 48 14	07 09 W	old Dec drum +75 29	"		1500
4537	"			00 48 28	00 55 28	07 17 W		"		1550
4538	"	~~[illegible]~~ OK now		00 56 04	01 03 04			"		1760
4539	"			01 04 ~~approx~~	01 11			"	420s	1900

Spectr. Temp. ..... Dome Temp./Hum. -2.2°C 70% Transparency Conditions ... OK some SE cloud 50

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~2000~~				CASS CCD	1800/5.6	200μ Full Length		21i	Hdy pgm	G = 5505 still	
1950								22i			
1760								23i			
1500								24i			
~~1500~~								25i			
								26i		Last minute cut off.	
								~~27i~~			
								27i		12K max/pixel	
730										cloud &	
1500								28i		clear again	
1500	4"5"							29i			
1550	6-7"							30i			
1760								31i			
1900								~~32~~ 33i			

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Py #6

Emulsion Batches:

Date 1991 Nov 9/10 Observers [Hdy] ... Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04540	HD197433	20 38.6	+75 14	01 11 35	01 18 35			4200bs	
4541	Comp							Fe As Clear	120s
4542	BIAS(4)								
4543	FLAT							TUNG A=1/4	20s
4544	HD197433			01 26 08	01 33 08	7 54W		4200bs	
4545	"			01 33 28	01 40 28			4200bs	
4546	"			01 41 40	01 48 40			4200bs	
4547	"			01 48 55	01 55 55			"	
4548	"			01 56 10	02 03 10			"	
4549	"			02 05 33	02 12 33			"	
4550	"			02 12 40	02 19 40	8 41W			
4551	Comp			02 20				Fe As Clear	120
4552	BIAS(4)								
4553	FLAT							TUNG A=1/4	20s
4554	HD197433			02 27 02	02 34 02			420	sec

Spectr. Temp. ..... Dome Temp./Hum. ...-2.3°C...71.5% Transparency Conditions ...PART. cloudy.....

Focus ...6.90.....

Spectr. Temp. ..... Dome Temp./Hum. ...-2.4°C...75%

mostly clear actually now

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1860	3"-5"	V 7.3 -7.7		CCD	1800/	200μ Full	5875Å	34ci	Hdy pgm		
8600											
									CCDT=- °C	Room T= -2.4°C	
								~~36~~ 37ci		12K max again	
1800								~~37~~ 38ci	Hdy pgm VW Cep		
1920								38ci	?	no cloud here CAO ☉ Na lines (em)?	
1800								39ci			
1700								~~40~~ 41ci			
1750								41ci			
~~1800~~	Command Line			CR	CR needed	CR?		42ci			
1750	(42ci 4200BS "w_FITS "43ci 4200BS's w FITS)							~~43~~ 44ci			
								~~44~~ 45ci			
								~~45~~ 46ci			
								~~46~~ 47ci			
								~~47~~ 48ci		MAX = 11 K	
								48ci			

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60 Date 1991 Nov 9/10 Observers [Hdy] ... Jr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC04555	V HD197433	White ~~error~~ 460 OK		023517	024217			420 OBS		1750
4556	V "			024225	024925			420 OBS		1700
4557	V "			025102	025802			420 OBS		1700
4558	"			025810	030510			420 OBS		1700
4559	"			030616	031316			420 obs		1600
4560	V "			031456	032156			420		1500
4561	"			0322	0329	095W		420		1400
4562	Comp							FEA Clear	120s	
4563	BIAS (4)									
4564	FLAT							TUNG Ap=1/4	20s	
4565	V HD197433	" "		033516	034216			420 s		1300
4566	"	" "		034225	034925			420 s		1200
4567	"			034955	035655			420		
start of tape 4568	"			035800	040827		exp - fan off			~~1100~~
4569	"			040917	041617			420 obs		1100

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ...Fine - sl. hazy.....

Focus ...6-90.....

Spectr. Temp. ..... Dome Temp./Hum. ...-25°C...78%

SE wind

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1750	4"-6"	"			G 550S 1800/51.6	300μ Full Length		46c;	Hdy-pgm	46c; 4200Bs w F.1 47c; 4200Bs w Filt	
1700								47c;			
1700								48c;	(48c 49 w/n	w Filts together) works fine	
1700								49c;			
1600	4"-5"							50c;			
1500	3"-4"							51c;			
1400								52c;			
								53c;			
										Dome T = -21C	
								54c;			
1200								55c;			
1200								56c;			
1700								57c;			
~~1100~~	6"	(1700 cnts						58c;		(10.5 min exp	
1160	6"-8"							59c;			

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Emulsion Batches:

Date 1991 Nov 9/10 Observers [Hdg] TS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC 04570	HD 197433	20 38·6	+75 14	04 16 38	04 23 38	10 45 W		420 OBS		1000
4571	Comp							Fe Ar Clear	120s	
4572	BIAS (4)									
4573	FLAT							TUNG A=1/4	20s	
4574	HD 197433			04 31 23	04 38 23			420		1000
4575	"			04 38 32	04 45 32			420		1230
4576	"			04 45 50	04 52 50			420 s		1100
4577	"			04 53 00	05 00 00			420 s		1230
4578	"			05 00 10	05 07 10			420 s		1100
4579	"			05 08 30	05 15 30			420 s		1370
4580	Comp						Fe Ar Clear	120 s		
4581	BIAS (4)									
4582	FLAT						TUNG A=1/4	20 sec		
4583	HD 197433			05 21 16	05 28 16	11 50 W		420 sec		1370
4584	"			05 28 25	05 35 25	11 57 W				1400

Spectr. Temp. ..... Dome Temp./Hum. -2.5°C 78% Transparency Conditions ..Sl. hazy.....

Focus ..690.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000	3"-8"			CASS CCD	1800/576	300u		60c;	Hdy		
								~~40c;~~			
										Dome T = -2.4°C	
								~~40c;~~		11K max ADU	
1000								40c;			
1230								41c;			
1200								42c;			
1200								43c;			
1200								44c;			
1370								46c;			
								~~47c;~~			
										Dome T = -2.5°C	
										MAX 10K/pixel	
1370	4"-6"		All backed up To Ferrous					47c;			
1480			and 40 Rm					48c;			

57

pg#9

Date 17.11.Nov.9/10..... Observers [Hdg.] ... J.G. .....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter Exp.
CC04585	HD197433	20 38·6	+75 14	05 35 35	05 42 35	11 56* E		420 obs
4586	Comp	drive off					FeAr Clear	120 sec
4587	BIAS(4)							
4588	FLat						Tung A=1/4	20 sec
4589	FLAT while on Regulus							
4590	Comp " " "			0614			FeAr Clear	120 sec
4591	BIAS							
4592	Regulus HD87901	10 03 03	+12 27		0618			~20 secs
4593	"				0623			200 bs
4594	"				0626			300 bs
4595	Comp						FeAr clear	120 secs
4596	BIAS(4)							
4597	FLAT						Tung A=1/4	20 sec
4598	DARK ~~10 min~~ 7 min							420 secs
4599	"	7 mins						"

Spectr. Tem

Focus .....

Spectr. Tem

Exp. Mtr.
1520
18
37

Spectr. Temp. ..... Dome Temp./Hum. -2.3°C 80% Transparency Conditions ... Fine .....

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. -2.6°C 81%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1520	4"5"				1800/51·6	200μ		50i	*	encoder says 12 09 West	
								52i			
								53i		CCDT = -101.9°C s+11	
									Topup commenced @ 0550		
								55		12K max ADU/pixel	
								56			
~~18K~~		1·36 v	B7V					57		10K max ADU/pixel	
18K								58			
~~34~~ 37K	trailed more							59i		12K MAX	
								20i			
								21i		12K max ADU	
		All backed up						22i			
								23i			

59 #1 sun/mon

Date 1.8.91.0av.10.11... Observers ..[H.dy.]...T.u.....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO4600	BIAS(4)								
4601	Comp					Telescope on East side		FeAr Clear	120s
4602	HD197433	20 38.6	+75 14	17 50 00	17 57 00			(Exp-read)	
4603	"			18 01 00	18 08 00			420s	
4604	"			18 08 10	18 15 10	00 38 W		420s	
4605	"			18 15 48	18 22 48			420sec	
4606	"			18 27 00	18 34 00			420sec	
4607	Comp							FeAr Clear	120s
4608	BIAS(4)								
4609 4612	FLATS x4								
	~~HD 149423~~	~~22 36.5~~	~~+10 19~~	~~19~~					
				(400 0	10 1024	40 1 CCD FMT)			
CCF00148/149	Focus Test	Comp/stellar posns				0 0	+10°	FeAr Clear	30/30

Spectr. Temp. ..... Dome Temp./Hum. +2°C ..... 71.6% Transparency Conditions .. P.&R.T. Cloudy .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

→ mostly SO

CCDFMT 510 0 40 1024 4 1

90 CGAIN CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800/562	200u Full Length	G	setting	prob 6020	118.743 3055 ~~1250.224~~ 1.888	
							Hα	3ci			
1056	4"8"	V 7.3 -7.7	G5V +K0V +K5V					~~4ci~~	Hdy vw cep		
800								4ci	"		
130								5ci		cloud	
400								6ci		"	
450								7ci		"	
								8ci			
								9ci		Dome T = +1.5°C	
	All to Worm and Perseus							~~9ci~~ 12ci		12k ADU MAX/pixel	
									Telluric Std	Completely Cloudy	
T = +1.6°C		Se +6.90			1800/562	900u Full Length			Stellar shift	~1 pixel red .5 pixel	

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pg #1

Note Header Times should be < 2 secs behind WWV Time if anything

Emulsion Batches:

Date 1991 Nov 11/12 Observers [Hdy] ... Tn

Note All Frame Header Thus page edited with EEDFITS pg

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4613 ✓	BIAS(4)								
4614 ✓	Comp					Tel on East Side			
4615	HD197433	20 38 6	+75 14	17 49 20	17 56 20	00 24 W		420	Obs
4616	"			17 56 35	18 03 35			420	Obs
4617	"			18 04 44	18 11 44	These 2 exps done by preentered commands.		420	Obs
4618	"			18 11 57	18 18 57			420	Obs
4619	"			18 19 18	18 26 18			420	Obs
4620	"			18 26 36	18 33 36			420	Obs
4621	"			18 34 46	18 41 46			420	
4622				18 42 00	18 49 00			420	
4623				18 49 15	18 56 15			420	
4624 ✓	Comp						Fe Ar Clear	120	Obs
1625 ✓	BIAS(4)								
4626	FLAT						TUNG A=1/A		25s
4627	HD197433	"		19 05 37	19 12 37	01 41 W		420	

Spectr. Temp. ..... Dome Temp./Hum. +2.6°C 70% Transparency Conditions .. Thin cloud .....

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

90 CGAIN
CCDT -> -100 C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G= ~~G~~ 1800/502	200u Full ~~Length~~					
								3			
2150	2-3	V 7.3 -7.7	G5 V +K0 V +K5 V				H2	~~4~~	Hdy pgm	VW cep	
≈2000								5			
1770	3"-4"							6	* 2 exps done together give a gap		
1900								7	minimum exp end to start of readout between	of 13 secs	
2100	2-3							8			
1770	2"-5"							9ci		for 6 co/s ≈ 3600 ADU sum; 9ci about best good	
meter sum of 2								10ci			
4300								11ci			
2000	4"							12ci			
9300								13ci			
										Dome T = +2.1 C	
								14ci		14 K MAX	
2450	2"-3"							15ci			

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pg #2

Date 1991 Nov 11/12 Observers [Hdy.] Ta

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Cc 04628	HD 197433	20 38 6	+75 14	19 12 50	19 19 50			420	04
4629	"			19 20 17	19 27 17			"	
4630	"			19 27 55	19 34 55			420	
4631	"			19 35 10	19 42 10			420	
4632	"			19 42 22	19 49 22	02 18W		420	
4633	"			19 49 43	19 56 43			420	
4634	BIAS(4)								
4635	Comp							XeAr Clear	120s
4636	FLAT							TUNG A=1/4	22s
4637	HD 197433	20 38 6	+75 14	20 02 05	20 09 05			420	06s
4638	"			20 09 20	20 16 20			420	06s
4639	"			20 16 35	20 23 35			420	06s
4640	"			20 25 05	20 32 05			420	06s
4641	BIAS(4)								
4642	FLAT							TUNG A=1/4	22s

Spectr. Temp. ..... Dome Temp./Hum. +2.0°C ... 71% Transparency Conditions . Hazy ... clouding in ... 64

Focus .... 6.50 .....

Spectr. Temp. ..... Dome Temp./Hum. +1.3°C ... 76%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2100	2"			CASS CCD	1800/5612	200u Full height	Hd	16i	Hdlypgm	v w cap	
1900								17i			
1800 sum of 2	3"							18			
3420								19			
1600								20			
1430								21i		* Lost star @ ~ 19 5600	
								~~22i~~		Dome T = +1.6°C	
								22i			
								23i		BK 11 hr Hdlypgm	
Sum of 2	3"-6"							24i	Hdlypgm	some cloud	
2950	"							25i			
1270	4"-6"							26i		more cloud	
625								27i		" " completely	
								28i			

65 pg#3

Emulsion Batches: .....

Date 1991 nov 11/12 Observers [Hdg] TG .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc07643 ✓	Comp	at VWCep posn. of course						FeAr Clear	12½s
7644	DARK			20 59					10 min
4645	DARK			21 14					10 min

Spectr. Temp
Focus .....
Spectr. Temp
Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. +1:4 ..... 76% Transparency Conditions ... Complete Cloud ... 96 in quickly

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/	200	H2	29			
				and Including TO CC 04645		Backed up To		Perseus & WORM		+ exahytal	

arison Exp

Thurs - Fri

Date 1991 NOV 14/15 Observers Hdy ... T.y

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04646 ✓	Comp			1857				FeAr Clear	120s
4647 ✓	HD214923	22 36.5	+10 19	19 03.50	19 05.50				
4648 ✓	FLAT	before exp		19 00	~~19 05~~			TUNG A = 1/4	22sec
4649 ✓	BIAS(4)	using regular BIAS.BAT							
4650	FLAT							TUNG A=1/4	22sec
4651	Comp								
4652	HD214923	22 36.5	+10 19	19 32.17	19 36.55				
4653	Comp							FeAr Clear	120s
4654	BIAS(4)	using HBIAS.BAT (Hdy's)							
~~CCF00150~~ 00151	Focus Test (Lost, but got Result basically) ~~Comp / stellar pairs~~			400	0 10 10	24 40 / 01 30W	CCD FinT / −10°	FeAr Clear	40/4
CC04655	FLAT (using Bright dome lights)			20 33 37	20 43 00	01 30W	−10°	Bright Lights	
4656	FLAT - Regular TUNG source			20 49		"	TUNG A=1/4	Heavy Lights	24 sec
4657	BIAS(4) using HBIAS								

Spectr. Temp. ..... Dome Temp./Hum. +5.6C 90% Transparency Conditions ... Cloudy .....

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... T = -10.0°C 90 Cgain [5100 40 1024 4 1 CCDFRAT]

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		V		CASS CCD	1800/562	200u FULL	Hd	3ci			
2600		3.40	B&V					5ci	Telluric Std	cloudy (600 Counts) 2400 ADU sum Avg o bkground.	
		~~3.40~~						4ci		195 Km/sec vsini	
										Dome T = 5.6°C	
								6ci			
20,500		V 3.40	B&V					7ci		semi clear - cloudy	
								8ci			
										T = +5.6°C	
					1800/562	200u FULL	Hd Length	1ci 2ci	Dome T = +5.5 C set 6.90		
									Stellar Red by 1 pixel		
6328					"	"	"	3ci			
								4ci			
				Backed up on Aer scan				(No working night though)		Dome T = +5.7C	

Fri Sat Tests

Date Nov. 15./16./91..... Observers ..T.N.....

Emulsion Batches:
..p.f.fraser...in..for All
.f.18..stop.in...too.
.....as.usual...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCF00150	✓ Hartmann	Comp posn							
151	✓ Focus "	stellar posn		22		0 0	+40°	FeNe Clear	4/4s
152	✓ " "	Comp/				"	"	FeNe	
153		Stellar		22 30				Clear	50/50
CC04658	✓ Comp without	ORDER Sep Filter		(7 & 10)		"	"	FeNe Clear	30sec
4659	✓ Comp "	"	" "	Different source only		"	"	FeAr Clear	600s
not written ~~4660~~	Comp with	short slit		23 42				FeNe Clear	20sec
4660	✓ Comp for MAP	OG560 Filter IN		(16)		0 0	+40°	FeNe Clear	40sec
4661	✓ Comp for MAP	"	✓			"	"	FeNe A=1/2	9sec
4662	FLAT FOR	CC04658 (slit different) [I guess there's a				on CCD window)		TUNG A=1/8	30sec

Spectr. Temp. ..... Dome Temp./Hum. 8.4°C H=90% Transparency Conditions ..... Cloudy .....

Focus ....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. ..... central 300 0 10 1024 40 1 CCDFmT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Dome T=+8.3°C				CASS CCD	G=5375 1200/	~~200~~ FULL Length	8560Å	20ci 21ci	~~8560Å~~	~~Yellow~~ "ORANGE" OG650 Filter used Stellar shift Red by 2 pixels	
		"			G=4000 1200/	200u Full Length	∝ 5500Å	22 23	nice ghosting	OG560 still In Stellar shift Red ≈ 1.5 pixels	
					"	"	"	24ci	nice symmetry some ghosting.	OG560 removed	
					"	"	"	25ci	No ghosting	no OG560 still	
					"	250 Short Slit (probably mid Length)		26ci	some ghosting	"	
4330 counts					G=5035 1200/ [Short Slit]	250	7650Å - 7960	31ci	4600	42K max flow for Release 8 1024 20 1 CCDFmT	
					G=5390 1200/			32ci	≈ 8600Å		
					G=4000 1200/	250u Short Slit		35ci		OG560 Removed	

All backed up to work flow but problem with Perseus link up. Rebooted CSS 556 & no problem. All to Perseus too.

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py#2 SAT-SUN CSS386 (new Data Aquisition PC) Time still agrees with Astro and MkIII www Times within 2 secs. Emulsion Batches:

Date 1991 Nov 16/17 Observers [Hdy] T.n Diffuser IN

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCF00154 V 155	Focus Test comp posn stellar u			~17		00 20	+40°	FeAr Clear	20 s 20 s
CC04663	BIAS					Telescope To East side for Night			
4664	Comp			17 58				FeAr Clear	60sec
4665	FLAT							TUNG A=1/4	30s
4666 HD218537		23 03 48	+63 06	18 11 55	18 19 11				
4667	"	"	"	18 19 15	18 33 15	t exp sug 960			
4667	FLAT							TUNG A=1/4	30s
4668	Comp							FeAr Clear	60sec
4669	BIAS								
4670	Comp when on vw Cap							FeAr Clear	120s
4671	BIAS (4)	" " "		18 49					
4672	FLAT				avg			TUNG A=1/4	25sec
4673	HD197433	20 38 6	+75 14	18 54 32	19 01 32	01 49 W	expos	Filament	
4674	"	"	"	19 02 47	19 09 47	exp sug=60	"	"	
4675	"	"	"	19 10 40	19 17 40			420	60s

Spectr. Temp. 4.6°C ..... Dome Temp./Hum. ~4.6C 54% Transparency Conditions ..CLEAR..cloudy at 72 deg

Focus ..6.90..... No indication of moisture on CCD window at START

Spectr. Temp. ..... Dome Temp./Hum. ..... CCDT -> -100C 90 CGAIN [as temps were just w. 24 hr

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	≈ 400 columns 0 10 1024 40 1 CCDFAST Remarks	Quality
				CASS CCD	G 5505 1800/5.16	200u FULL	~~Hd~~	~~Tci~~ 2ci	Stellar < 1.5	Binned 40 - 1 verticals pixels Read but Temp ↓ fast	
								~~3ci~~		510 0 40 1024 4 1 CCDFAST	
					G 6048 1800/565	200u FULL Length	Hd	4ci			
								5ci		14K max/pixel	
2830	4"-6"	V 6.26	B3V	Vsini = 180	*G 6048 1800/565		*Hd	6ci	Telluric Std	*Hd Blue of center PART Cloudy	
8600		"	"					7ci	"		
								8ci		14K ADU MAX	
								9ci			
								~~9~~ci		Dome T = +3.1C	
					G *6020 1800/563	200u Full	Hd coated		*No Grating tilt changed slightly		
								10ci		12 K ADU MAX	
1300	6"	V 7.3 - 7.7	G5V +K0V +K5V					11ci	Hdg proj	2400 ADU Sum 6 cols for AOC 200u Sky	
1300	4"-8"							~~12ci~~	"		
~~1400~~ 1240								~~13ci~~	"		

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Date 1991 Nov 16/17 Observers [Hdy.] T.H.

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO4676	HD197433	20 38·6	+75 14	19 17 50	19 24 50			420	OBS.
4677	"			19 25 08	19 32 08			420	OBS
4678	FLAT					TUNG A=1/4	25 secs	~~420 OBS~~	
4679	BIAS(4)			19 38					
To Perseus 4680	Comp			≈ 1940				FeAr Clear	170s
4681	HD197433	20 38·6	+75 14	20 00 07	20 07 07	02 55W		420	OBS
4682	Comp			20 09			FeAr Clear	120s	OBS
4683	HD197433			20 12 55	20 19 55			420	OBS
4684	"			20 22 15	20 29 15			"	
4685	"			20 29 33	20 36 33			"	
4686	"			20 36 42	20 43 42			"	
4687	"			20 44 01	20 51 01			420	OBS
4688	"			20 51 10	20 58 10			420	OBS
4689	Comp			20 58 40			FeAr Clear	120	sec
4690	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. +2.7 ..... 53% Transparency Conditions .. Cloudy .....

Focus .. 6.90 .. still .....

Spectr. Temp. ..... Dome Temp./Hum. ..... central

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~1675~~ ~~1940~~	6"			CASS CCD	G-6030 1800/	300u full	H & 6 5 6 8		Hdy pgm	v wcep cloud ahead	
1675						4					
						4				11 K HOU MAX/pixel	
										122.503 T = +2.5°C	
320 in 1st 3 mins	4-8"	V 7.3 - 7.7								* another 400 cnts in last 2 mins PART cloudy	
9500											
900										Hα very narrow	
980	6"										
1150	4-6"										
780											
1000 sum of 2 2000	4-8"										
										Dome T = +6.4°C	

75 pg#3

Emulsion Batches:

Date 1991 Nov 16/17 Observers [Holy] T.H

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4691	FLAT			21				TUNG A=1/4	25s
4692	HD197433	20 38 6	+75 14	21 04 07	21 11 07	03 59W		420	OBS
4693	"			21 11 35	21 18 35			"	
4694	"			21 18 50	21 25 50			"	
4695	"			21 26 05	21 33 05			"	
4696	"			21 33 19	21 40 19			"	
4697	"			21 40 30	21 47 30			"	
4698	"			~21 49 45	~21 56 45			"	
4699	"			~21 57 00	~22 04 00			"	
4700	Comp			22 05				FEAT CLEAR	120s
4701	BIAS (4)								
4702	FLAT							TUNG A=1/4	25s
4703	HD197433			22 09 20	22 16 20			420	OBS
4704	"			22 16 25	22 23 25			420	OBS
4705	"			22 23 38	22 30 38	05 19W		420	OBS

Spectr. Temp. ..... Dome Temp./Hum. +1.3°C 55% Transparency Conditions ..... OK .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		V 7.3-7.7		CASS CCD	1800/562 G=6020	200u Full Length	Hα	~~24~~ 11i		MAX ADU/pixel = 12K	
1100								12i	Hdg pgm		
1090								13i	Hdg pgm	V w/ cep all night	
1080								14i			
1150	4"							15i			
1150								16i			
1200	4"-6"							17i		Hα nicely ebb	
3 min of 2								~~18~~			
= 2130								~~19~~			
								~~20~~ 21i			
								~~21~~	Dome	T = +00.2°C	
								22i		12K max ADU	
960								23i			
1000	5"-7"							24i			
900								~~25~~			

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Emulsion Batches: .....

Date 1991 Nov 16/17 Observers [Hdg.] T. + I. Mtki .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 4706	VH0197433	20 38 6	+75 14	22 30 53	22 37 53				
4707	"			22 38 05	22 45 05				
4708	"			22 45 50	22 52				
4709	"			22 53 10	23 00 10				
4710	FLAT							Fltg A=1/4	25s
4711	BIAS								
4712	Comp							Fe Ar Clear	
4713	VH0197433			23 06 50	23 13 50			470	obs
4714	"			23 14 05	23 21 05				
4715	"			23 24 30	23 31 30				
4716	"			23 31 45	23 38 45				
4717	"			23 38 55	23 45 55				
4718				23 46 05	23 53 05				
4719				23 53 15	00 00 15				
4720				00 00 27	00 07 27				

Spectr. Temp. ..... Dome Temp./Hum. 0°C 52% Transparency Conditions ....OK.....

Focus ....6.90 temp setting closer to

Spectr. Temp. ..this setting ideal Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
900		V 7.3 -7.7	G5V +K0V	CASS CCD	G6020 /800	200μ Full Length	Hα	~~77i~~	Hdy pgm	V W cep	
800	4"84		+K5V					~~98i~~			
760								~~29i~~			
								(18i)			
								~~42i~~			
								~~32i~~			
								~~40i~~			
								~~21i~~		Rade 1290	
								~~22i~~			
700.								~~220i~~			
								~~64i~~			
								~~25~~ 4			
800.								(4i)			
750.								~~20i~~			
								~~38i~~			

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pg #5

Emulsion Batches:

Date 1991 NOV 16/17 Observers [Holy] Th. / Mk

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc04721 v	~~BIAS(4)~~ Comp							Fe4 Clear	120s
4722 v	BIAS(4)								
4723 v	FLAT							TUAG A=1/4	25
4724 v	HD197433			00 1501	00 2201			420	OBS
4725 v	"			00 2215	00 2915			420	OBS
4726 v	"			00 2925	00 3625	0725W		"	
4727 v	"			00 3635	00 4335			"	
4728 v	"			00 4348	00 5048				
4729 v	"			00 5000	00 5800				
4730 v	"			00 5813	01 0513				
4731 v	"			01 0611	01 1311				
4732 v	BIAS(4)								
4733 v	FLAT			01 14			32 Obs	TUAG Ap=1/4 FG Ar Clear	72 sec
4734 v	Comp								120s
4735 v	HD197433			01 1846	01 2546			420	obs

Spectr. Temp. ..... Dome Temp./Hum. -1.5C 53% Transparency Conditions ..... Fine

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										Dome T = -1.6°C	
										14K MAX ADU	
	8"							30i	Hdg pgm	V w cap	
1800?	probnot, prob 2 exps worth							~~37i~~			
950								~~42i~~			
900	6-8"							~~39i~~			
940								~~41i~~			
940								~~37i~~			
870								~~33i~~			
900								~~34i~~			
								1i		Dome T = -2.0°C	
								~~25i~~		13K MAX	
								25i			
900								37i			

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pg #6

Date 1991 Nov 16/17 Observers (Hdg) Tg

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
CC 04736	HD 197433	20 38 6	+75 14	01 26 00	01 33 00	W		420	obs	440
4737				01 33 14	01 40 14			"		850
4738				01 40 24	01 47 24			"		
4739				01 47 52	01 54 52			"		
4740				01 55 20	02 02 20			"		740
4741				02 02 30	02 09 30			"		730
4742				02 09 38	02 16 38	09 05 W		"		660
4743	BIAS (4)									
4744	Comp							FCA Clear Tung 4:1/2	120s	
4745	Flat								2258	
4746	HD 197433			02 21 55	02 28 55			420	obs	
4747	"			02 29 30	02 36 30			"		450
4748	"			02 36 44	02 43 44			"		430
4749	"			02 43 58	02 50 58			"		2 of 2 exp
4750	"			02 51 08	02 58 10					1340

Spectr. Temp. ..... Dome Temp./Hum. -2.2°C 54% Transparency Conditions ... Fine .....

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
≈ 400								~~25~~ 26i	Hydrogen		
850								~~29~~ 29i			
								31i			
								~~32~~ 32i			
740	8"							33i		18 23 Sec	
~~730~~ ~~740~~								19i		37 & 30	
660								20i			
								1i		Pose T = -2.8°C	
								~~21i~~			
								~~21i~~		12 k MAX	
								21i			
650								22i			
630								23i	All ok on E to here.		
sum of 2 exps								24i			
1340	5" 10"							25i			

83

1967

Date 1991 Nov 16/17 Observers [Hdg] Jm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC04751.As V	HD197433	20 38 6	+75 14	02 58 34	03 05 34			420 Obs	
4752 V				03 06 39	03 13 39			4	
4753 V				03 13 51	03 20 51	10 10 W		4	
4754 V	BIAS(4)								
4755 V	FLAT								
4756 V	Comp								
4757 V	HD197433			03 26 17	03 33 17			420 Obs	
4758 V	"			03 33 30	03 40 30			"	
4759 V	"			03 40 40	03 47 40			"	
4760 V	"			03 47 53	03 54 53			"	
4761 V	"			03 55 04	04 02 04	10 51 W			
4762 V	BIAS(4)								
4763 V	Comp							Feat Clear	120s
4764 V	FLAT								
4765 V	HD197433			04 08 06	04 15 06			420s	

Spectr. Temp. ..... Dome Temp./Hum. -2.8C 57% Transparency Conditions ..... Fine .....

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... All Inst parameters the same

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	8"					200u Long Fall length		28ci	Hd single here	11, 12 18, 26, 27, 30 save Test	
700	6"-10"							29ci			
~~800~~								31ci			
								~~29~~ 1ci		Dome T = -3.2°C	
								32ci			
								33ci			
740								34ci			
730								35ci			
750	5"-10"							~~36~~ i			
790								~~34~~ i			
825								~~35~~ 36ci			
								1ci		Dome T = -3.6°C	
								~~36ci~~		~~test~~	
										1x4 1x4 4x4 4x4	
880								36ci			

85

pg #8

Date 1991 Nov 16/17 Observers [Hdg] J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04766	HD197433	20 38·6	+75 14	04 15 32	04 22 32			420 obs	
4767	"			04 22 48	04 29 48			"	
4768	"			04 30 00	04 37 00			"	
4769	clouds edges			04 37 55	04 44 55			"	
4770	"			04 45 10	04 52 10			"	
4771	"			04 52 22	04 59 22	11 49W		"	
4772	"			04 59 30	05 06 30	11 56W		"	
4773	~~BIAS(4)~~ "			05 06 42	05 13 42	11 57E			
4774	BIAS(4)	(drive off)				"			
4775	FLAT	"				"		Tungs A=14	225
4776	Comp					"		Tungs Clear	120s
4777	Comp w/ Regulus								
4778	BIAS(4)								
4779	FLAT								
4780	HD87901	10 03 03	+12 27	05 30 30					

Spectr. Tem
Focus
Spectr. Tem

Exp Mtr.	
375	
370	
310	
370	
370	
320	
370	
360	

Spectr. Temp. ..... Dome Temp./Hum. -3.2° 58% Transparency Conditions .. Fine .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
875	6"				G=6030			13ci	Hdg prgm	v w cep (blue comp shifted blue, and single?)	
870								14ci			
910	4"-6"							~~16~~ci		Hd dbl	
950								17ci			
870	8"							19ci			
920								20ci			
870								22ci			
790								23ci			
								1ci		Dome T = -3.8°	
								~~37~~ci			
								~~28~~ci			
								~~35~~ 30ci			
								~~2~~ci			
		v 1.37	B					3ci	tellurics Std		

87

95 Pg # 9

Date Nov. 16/17/91 Observers [Hdy] Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc04781	HD 87901	10 03 03	+12 27	05 34				35	obs
82	"			05 35				40	OBS
83	FLAT								
84	BIAS(4)	while on Regulus							
85	comp	"							
86	comp	while on Mizar						FeAr clear	FAS
87	BIAS(4)								
88	FLAT							tung A=1/4	22sa
89	HD 197433	20 38 6	+75 14	05 53 20	06 00 20	1 11 E			
cc04790	"			06 00 32	06 07 32				
4791	"			06 08 23	06 15 23				
4792	"			06 15 35	06 22 35				
4793	"			06 22 50	06 29 50				
4794	"			06 30 05	06 37 05				
4795	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . Fine to the end .....

Focus .... 6-90 .....

Spectr. Temp. ..... Dome Temp./Hum. ~4.2°C 61%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6020 1800/	200u Full Length	Hα sky#11		telluric std		
30K										MAX = 5K ADU/pixel	
										CCD T OK ~ -101.9°C	
								8ci			
										Dome T = -4°C	
780	6"	7.3 V 7.7						9ci	Hdg psyb		
800	4"-6"							11ci	"	sharp single Hα	
800	"							10ci	"		
810	"							12ci			
980								13ci		sky coming	
1430	3"-4"							16ci		sky here	
								1ci		Dome T = -4.3°C	

89

Pg #10

Date 1991 Nov 16/17 Observers Hdy Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04796	FLAT							TUNG H=1/4	22s
4797	Comp							FEAT Clouds	120s
4798	SKY			065125	070032	0 0	+1840		
4799	PHRK 10min			0704	07 14	"	"		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Fine sunrise .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... ~44° 62%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	G 6020 1800/562	200μ Full Length	Hα	17i		CCD Temp -100.0°	
								19i	Full Slit	Illumination test	
33K						"	"	22i	SKY	during topup	
								23i			
					Backed up to			Perseus	using	while in DV doing dark	
							START	07 09		~ 3secs/file	
				(START worm backup @				07 17 11		out of DV - straight copy as	
				(about the same rate				3sec/file)		in the case of Perseus backup	
							end copy	07 25 30			
				Exabyte to			4799	next night.			

91

pg #1 Sun mon on 19/24" (photometry of same) **Emulsion Batches:** .....

Date 1991 Nov 17/18 Observers [Hdg] TG ....

CSS 38G PC Time Right on ... w.v. time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 4800 ✓	BIAS(4)								
01 ✓	Comp							FeAr Clear	120s
02 ✓	Flat							TUNG H=1/4	30s
03 ✓	HD218537	23 03 43	+63 06	17 47 00 ✓	17 55 18	01 44 E	on Decline +63 30 Approx		
04 ✓	FLAT							TUNG H=1/4	30s
05 ✓	Comp							FeAr Clear	120
06 ✓	BIAS(4)	still on HD218537							
07 ✓	Comp when	on HD197433						FeAr Clear	120
08 ✓	HD197433	20 38 6	+75 14	18 10 42	18 17 42	01 09 W	Exp	Band	
CCD 4809 ✓	"			18 18 39	18 25 39		420	OBS	
4810 ✓	"			18 25 50	18 32 50		"		
4811 ✓	"			18 33 05	18 40 05		"		
4812 ✓	"			18 40 15	18 47 15		"		
4813 ✓	"			18 52 25	18 59 25		420	OBS	
4814 ✓	"			18 59 38	19 06 38	01 58 W	420	OBS	

Spectr. Temp. ..... Dome Temp./Hum. +0.5°C .70% Transparency Conditions .... Fine .... thin cloud .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

510 0 40 1024 A 1 CCDFINT
90 CGAIN T = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5505 1800/5106	200μ Full Length		2ci	Holy pgm	Same 5777 - 5975A	
								3			
								4		11K mg+ APH/pixel ÷ 11K SUM AVG ADU 8 columns	
G300	3"	V 6.26	B3 V	(If could maybe be HD 218560 no, probably bright star after all. A K0 sp type?)				5ci	* Telluric Std	~~Avoid~~ nice mirror No Lines??	
								~~6ci~~		11K MAX	
										Dome T = 100.4°C	
½1900	3"	V 7.3- 7.7	G5 V +K0 V +K5 V					6ci	Holy pgm	V W Cep	
1750	2-3"							7ci		~~(skipped 8, 9 ci)~~	
2000	"							~~10ci~~ 8ci			
1650	"							11ci			
3.								12ci			
1600								13ci			
1400	2"-4"							14ci			

93

pg #3

Emulsion Batches:

Date 1991 NOV 17/18 Observers [Hdy.] J.S.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4815	✓ BIAS(4)								
4816	✓ Comp							Fe/Ar Clear	120s
4817	✓ FLAT							TUNG ND=1/4	30s
4818	✓ HD197433	20 38 6	+75 14	19 12 06	19 19 06			420	60s
4819	✓ "			19 19 20	19 26 20			420	
4820	✓ "			19 26 30	19 33 30			420	
4821	✓ "			19 33 44	19 40 44			420	
4822	✓ "			19 40 56	19 47 56			420	
4823	✓ "			19 48 00	19 55 00			420	
4824	✓ "			19 55 15	20 02 15			420	
4825	✓ "			20 02 28	20 09 28			420	
4826	✓ "			20 09 40	20 16 40			420	
4827	✓ BIAS(4)								
4828	✓ FLAT Restore after crash			CCD Control Reset here before this exp				TUNG ND=1/4	33s
4829	✓ BIAS(4) after Restart								

Spectr. Temp. ..... Dome Temp./Hum. +00s/.....74% Transparency Conditions ..thin cloud.....

Focus ...6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5505 1800/5180	200μ Full Length	5875Å	1Ki			
								~~15Ki~~			
								18Ki		~~17Ki~~ 10K MAX	
1500		V 7.3 - 7.7						18Ki	V w. Cep		
1500								19Ki			
1500	2"							20Ki			
sum of 2	2-3"							21Ki			
3000								22Ki			
~~17~~40	2							23Ki			
2090	<2"							24Ki			
9250								25Ki			
2060.								26Ki			
										Prime T=0.3°C	
								~~25Ki~~		MAX=11K	

95 pg #3

Date .1991 NOV 17/18. Observers ..MK..(Hdy)....Jm.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO4830	HD197433	20 38 6	+75 14	20 28 00	20 35 00				
4831	Comp							FeAr Clear	120s
4832	HD197433			20 39 28	20 46 28			420	obs
4833	"			20 47 21	20 54 21			420	obs
4834	"		2 03 04	20 54 48	21 01 48			420	obs
4835	"			21 02 01	21 09 01			420	obs.
4836	"			21 09 14	21 16 14			420	obs.
4837	"			21 16 25	21 23 25			420	obs
4838	"			21 23 34	21 30 34			420	obs.
4839	BIAS (4)								
4840	Comp							FeAr Clear	120s
4841	FLAT							TUNG A-1/4	33s
4842	HD197433	H		21 37 00	21 44 00			4200	obs
4843	"	H		21 44 13	21 51 13			4200	obs
4844	"	H		21 51 25	21 58 25	04 50W		420	

Spectr. Temp. ..... Dome Temp./Hum. 7.76 H +00.3°C Transparency Conditions ... thin cloud .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800	300μ	5875Å	3i			
								4i			
1900								5i			
2300 ~~1455~~								6i			
2200								7i			
2300								8i			
2300								9i			
2400								10i			
1900								~~11~~			
								~~12~~		Dome T= -00.2°C	
								~~13~~			
								~~14~~			
								~~15~~		11 Kinney	
sum of 3	<2"-4"							~~16~~	VW Cep		
2980								17i		thin cloud here	
1500								~~18~~			

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pg #4

Date 1991 Nov. 17/18 Observers [Hdy.] M.S. L.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
CC04845	Hester HD197433	20 38.6	+75 14	21 59 20	22 06 20					1:50
4846				22 06 30	22 13 30					1:50
4847				22 13 42	22 20 42					1:50
4848				22 20 56	22 27 56	—				1:20
4849				22 28 10	22 35 10					1:70
4850	BIAS(4)									
4851	FLAT							Fe Ar A=1/4	33s	
4852	Comp not written check							Fe Ar Clear	120s	
4853	HD197433	20 38.6	+75 14	22 41 44	22 48 44			420	obs	1:50
4854				22 48 58	22 55 58			420	obs	1:50
4855	renamed to HS			22 56 10	23 03 10			420		1:30
4856				23 03 28	23 10 28			420		1:30
4857				23 10 42	23 17 42			420		1:50
~~4858~~	~~check many to 4848 written HS But should be~~			~~23 18 50~~	~~23 25 50~~	I lost It after 4411		~~420~~		
4859				23 36 05	23 43 05			420		1:200

Spectr. Temp
Focus....
Spectr. Temp

Spectr. Temp. ..... Dome Temp./Hum. -00.6°C ..... 76% Transparency Conditions . hazy ..... thinly cloudy .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1650				CASS CCD	1800/516	200μ		15i	V W Cep Hdy pyn		
1500	2"							16i			
1400	3-4"							17i			
1320								18i			
970								19i			
										Dome T = -10°C	
								23i		12K MAX ADU/pixel	
								24i		2e not usual bias Requires	
1150	<2"							23i	V W Cep		
1050								24i			
1030								25i			
1230	<2"							26i			
1400								27i			
Sunset								28i	Too Late	ye Hing back to it tomorrow	
3700								29i			

'91 pg #5

Emulsion Batches:

Date 1991 NOV. 17/18 Observers [Hdq.] MKi / Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC04860	BIAS(4)									
4861	Comp							FeAr clear	120s	
4862	FLAT							TuNG Hp=1/4	33s	
4863	HD197433	20 38 06	+75 14	23 38 38	23 45 38				420.	
4864	"			23 46 20	23 53 20				420	
4865	"			23 53 33	00 00 33				420	
4866	"			00 00 45	00 07 45	7 00W			420.	
4867	"			00 07 56	00 14 56				420.	
4868	"			00 15 08	00 22 08				420.	
4869	"			00 22 20	00 29 20				420.	
4870	"			00 29 30	00 36 30				420	
4871	none			00 36 45	00 43 45				420	
4872	BIAS(4)									
4873	FLAT							TUNG H=1/4	33s	
4874	comp							FeAr Clear		

Spectr. Temp. ..... Dome Temp./Hum. -1.0°C ... 77% Transparency Conditions ... thin cloud 100

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								~~1~~			
								~~11~~			
								~~12~~		MAX ADU = 11.5 /pix/	
1700								~~13~~			
1700								~~14~~			
1700.								~~15~~			
1500								16			
1550.								17			
1600								~~18~~			
1500								19			
1500	3"							~~20~~			
	3"-4"							~~21~~			
								1			
								~~2~~		11.5 K HPU MAX	
								~~23~~			

101

Pg #6

Date 1991 Nov 17/18 Observers [Hdy] ... T.y ...

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4875	HD197433	20 38.6	+75 14	00 50 44	00 57 44	07 50W		420 nm	60s
4876				00 58 00	01 05 00				
4877				01 05 13	01 13 13				
4878				01 12 27	01 19 27				
4879				01 19 40	01 26 40				
4880				01 26 50	01 33 50				
4881				01 34 00	01 41 00				
4882	BIAS(4)								
4883	Comp							FeA-CleanTung	120s
4884	FLAT							A=1/4	33s
4885	HD197433	20 38.6	+75 14	01 47 00	01 54 00			420	60s
4886	"			01 54 12	02 01 12			420	"
4887	"			02 01 24	02 08 24			420	"
4888	"			02 08 37	02 15 37			420	60s
4889	~~Hotwater~~ "			02 15 50	02 22 50			420	
	Ok now								

Spectr. Temp. ..... Dome Temp./Hum. −1.5°C 80% Transparency Conditions hazy .....

Focus 6-90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1250	2"-3"	V 7.3 -7.7		CASS CCD	6505 1800/	200μ	5875Å	~~3~~ci			
1200								~~4~~ci			
1410								~~5~~ci			
1350								~~6~~ci			
sum of 2								~~7~~ci			
2500								~~8~~ci			
1200								31ci			
										Dome T = −1.3°C	
								3ci			
								4ci		11.6 K ADU/pixel MAX	
1180	~~2"-3"~~							5ci			
780 x	3-4"							6ci		echelle? dbl slope	
960	3"-4"							7ci			
960								8ci			
1000								9ci			

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Emulsion Batches:

Date 1991 Nov 17/18 Observers [Hdy.] T.n

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04890	HD197433			02 23 00	02 30 00				
4891	"			02 30 28	02 37 28	09 30W			
4892	BIAS(4)								
4893	FLAT							Tung A=1/4	33s
4894	Comp							Fe Ar Clear	120s
4895	HD197433	20 38 6	+75 14	02 43 24	02 50 24			420	60s
4896	"			02 50 40	02 57 40			420	60s
4897	"			02 57 55	03 04 55			420	
4898	"			03 05 8	03 12 8			420	
4899	"			03 12 18	03 19 18			420	
4900	"			03 19 26	03 26 26			420	
4901	"			03 27 20	03 34 20			420	
4902	BIAS(4)								
4903	Comp							Fe Ar Clear	120s
4904	FLAT						Tung A=	1/4	33s

Spectr. Temp. ..... Dome Temp./Hum. -1.5C 83% Transparency Conditions ..hazy.....

Focus ...6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

* Note IF one set G=5490 then str line near blue end would be better without compromising NaD lines

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
870	2"5"			CASS CCD	G 5505 * 1800			~~1C1~~	v w Cep still		
1000	"							~~1C1~~			
								1C1		Dome T = -1.4°C	
								~~1C1~~		11.6K MAX ADU	
								~~1C1~~			
sum of 2								~~1C1~~			
2000	2"3"							~~1C1~~			
1000								~~1C1~~			
930	2"6"							~~1C1~~			
900	"							1C1			
940								~~1C1~~			
780								~~1C1~~			
								1C1		T = -1.4°C	
								~~1C1~~			
								~~1C1~~		MAX ADU = 12K	

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pg #8

Emulsion Batches:

Date 1.9.96 Nov 17/18 Observers [Holy] T.A.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04905 ✓ fs	HD197433	20 38 6	+75 14	03 39 20	03 46 20	10 39W		420 s	
4906 ✓	"			03 46 32	03 53 32			420 s	
4907 ✓	"			03 53 ~~44~~	04 00 44			420 s	
4908 ✓	"			04 01 04	04 08 04			"	
4909 ✓				04 08 26	04 15 26			"	
4910 ✓				04 15 36	04 22 36				
4911 ✓	BIAS (4)								
4912 ✓	FLAT							TUNG A = 1/4	33 s
4913 ✓	Comp							Fe Ar clear	120 s
4914 ✓	HD197433			04 27 50	04 34 50			420 cts	
4915 ✓	"			04 35 06	04 42 06			"	
4916 ✓ ~~check write for typo~~ OK				04 42 15	04 49 15	11 42W		"	
4917 ✓				04 49 30	04 56 30			"	
4918 ✓				04 56 42	05 03 42	11 57W			
4919 ✓	BIAS (4)	(drive off now)							

Spectr. Temp. ..... Dome Temp./Hum. −1.3°C ... 85% Transparency Conditions . some cloud & haze .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. −1.2°C ... 90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	4"-8"			CASS CCD	1800		5875Å	25ci			
sum of 2								~~26~~ci			
1320	4"-10"							~~27~~ci	27ci		
690								~~22~~ci			
730	4"-6"							~~29~~ci		triple NoD	
750								30ci			
								1ci		Dome T = −1.4°C	
								~~12~~ci	12ci	10 k ADU max	
								13ci		no water drops seen in FLAT plot.	
740	3"-5"							14ci		V w Cep again	
700	"							15ci			
600	4"-10"							16ci			
sum of 2								17ci			
1250								18ci			
								~~19~~ci			

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Emulsion Batches:

Date 1991 Nov 17/18 Observers [Hdq] T.H.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
CC04920 ✓	FLAT ~~Comp~~							TUNG A=1/4	33s	
4920 ✓	Comp							FeAr clear	120s	
4922 ✓	~~Comp~~ FLAT when on Regulus							TUNG A=1/4	33	
4923 ✓	Comp							FeAr clear	120s	
4924 ✓	BIAS(4)									
4925 ✓	HD87901	10 03 03	+12 27	05 23 50		01 10E		40 obs		6.1k
4926 ✓	"			05 27 00				40 obs		7.1k
4927 ✓	BIAS(4)									
4928 ✓	Comp							FeAr clear	120	
4929 ✓	FLAT							TUNG A=1/4	33	
4930 ✓	Comp for HD89449							FeAr clear	120s	
4931	HD89449	10 14 3	+19 59	05 49 20	05 53 20	00 56E	(eg radial)			7.1k
4932 ✓	Comp							FeAr clear	120s	

Spectr. Temp. ..... Dome Temp./Hum. -1.2°C ... 90.2% Transparency Conditions ... O.K. ...

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. -00.5°C ... 94%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1		CASS CCD	1800	200u Full length	5875Å	20ci			
								20ci			
								22ci		10k max	
								23ci		CCDT still -101.8°C	
								1ci		Dome T. -00.8°C	
4CK		V 1.37	B7 V n					24ci		12k max	
34K								26ci		13k max	
								1ci		$\bar{x}$ = 117.120 σ .845	
								28ci			
								29ci			
								10ci			
8600		V 4.79	F6 V					11ci	std vel		
								12ci			
			All to Perseus and Horn								

Emulsion Batches:

Date 1.9.91..Nov.18/19. Observers .T.....Tests.....

.....

.Diffuser..IN..for.All

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination Filter	Comparison Type/Filter	Comparison Exp.
CC04933 ✓	Comp MAP	FeNe	(31) ✓				OG560 ORANGE	FeNe ~~(Lamp)~~ A=1/2	20sec
CCF00156 ✓	Focus Test	Comp posn		23 30			"	FeNe A=1/2	20s
CCF00157	" "	Stellar posn					"	"	"
CC04934 ✓	FLAT @	7920Å	39 ~~9K~~				"	TUNG A=1/16	20sec
4935 ✓	Comp MAP	FeAr	47 ✓	15secs A=1/8 (Remember 15:1 burning)	6 strong lines @ ~ 6000 ADU			FeAr A=1/8	~~15sec~~
4936 ✓	Comp MAP	FeAr.	~~55~~ ✓					FeAr A=1/8	15sec
4937 ✓	" "	FeNe	63 ✓					FeNe A=1/2	10sec
4938 ✓	FLAT @	7500Å		(A=1/16	30sec exp at Ap wheel homing)			TUNG A=1/16	~~3~~
4939 ✓	"	7100Å		"	"	"		"	20sec
4940 ✓	Comp FeNe	7100Å	(87) ✓					FeNe A=1/8	10sec
4941	Comp FeAr	7100Å	(95) ✓					FeAr A=1/8	20sec
4942	Comp FeNe	~~8570~~ 7100Å	8570Å (103) -1.32F In this Ap FeAr not worthwhile					FeNe 1/8	20sec
4943 ✓	FLAT @	8570Å	111 (7920)				TUNG A=1/16		20sec
4944	BIAS ~~Lamp~~ (Regular x 1)		119 4K						
45	Not booked up yet								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD T at Lowest ~~-~~ -125°C 385 0 8 1024 ~~151~~ CCD FMT

λ RANGE = 440 Å on chip 90 GAIN ~~7~~

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=4000 831/38.0	250u *	2 coat 7690-8136	33ci	7920Å centrd	Comp Sp centered on chip at col # 450	
					~~G 4000 Lowest~~ ~~Slit Length~~						
	(120 G units for ≈ 400Å change)				[Mid Length Slit Length]			34ci	7920	MAX ADU ~~for 3 cts~~	Right
None	T=	+4.3°C		Focus 6.90				35ci	7920	≈ 2500 AVG for 2 strongest	ON.
					~~G 3880~~ G=4000			36ci	~~7500Å~~ 7920Å	11K ADU max	
~~26 cts~~		6 strong lines easily			saturate. G 3880 831/36.8	~~0.25u~~		37ci	7920Å		
								38ci	7500Å	6 str lines ≈ 10K on max ADU	
360								~~35ci~~	7500Å	5 str lines → saturation	
								~~40ci~~	7500Å	MAX 13000 ADU / pixel	
					G 3760 831/35.8			~~39ci~~	7100Å	12000 ADU / pixel	
22					"			40ci	7100Å	5 str lines MAX @ 15K ADU	
5 cts					"			~~39~~ 41ci	7100Å	4 str lines MAX 4K ADU	
45					G=4200 831/	250u mid	coating 8350-8790	42ci	~~8670~~ 8670Å	good cosmics MAX 3500 ADU	
					"	"	"	43ci	"	8K MAX ADU	
					Just left on			for	row.		
								44ci			

III

pg #1 Thurs - Fri

Date 1991 Nov 21/22 Observers H.dy / J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4945	BIAS(4)	using	HBIAS						
4946	FLAT								
4947	Comp			-				Fe Ar Clear	120s
4948	HD 177724	19 00 49	+13 42 53	17 32 13	17 35 50	2 15 W			
4949	Comp							Fe Ar Clear	120s
4950	FLAT			17 43 44				TUNG A=1/4	2.5s
4951	BIAS(4)	using HBIAS							
4952	Flat	at vtw cap posn						JUNC A=1/4	22s
4953	Comp							Fe Ar Clear	120s
4954	BIAS(4)								
4955	HD 197433	20 39 6	+75 14	18 00 30	18 07 30	01 15 W		420	obs
4956	"			18 07 52	18 14 52			420	obs
4957	"			18 15 08	18 22 08			420	obs
4958	"			18 24 20	18 31 20			420	obs
4959	"			18 31 34	18 38 34			420	obs

Spectr. Temp. .P..... Dome Temp./Hum. +60°C 66% Transparency Conditions . PART Cloudy.....

Focus .....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCD T → -100°C

90 CG4 in Dome

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G= 6020 1800/5.62	200μ	Hα	P	510 0	40 1024 4 1 CCOFMT	
								3		12.5 k max	
								4c			
3,628		2.99	40Å/m					5c;	Telluric std	looks ok 13k max/pixel	
								6c;			
								7c;		136 k max/pixel	
								1c;			
								8c;		11 k max/pixel	
								~~9c;~~			
sum of 7		7.3 - 7.7						9c;	Hdg pgm	some cloud	
2000	3-4							10c	"		
1020								11c;	"		
870								12c;	"		
960								13c;	"		

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pg#2

Date 1991 Nov 21/22 Observers Hdy T.H

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04960	HD197433	20 38·6	+75 14	18 39 17	18 46 17			420	
4961	"			18 46	18 53			"	
4962	"			18 53 30	19 00 30	02 08 W		"	
4963	BIAS(4)	HBIAS1.BAT							
4964	comp							FeAr Clear	120s
4965	FLAT							THAR A=1/4	23s
4966	HD197433	20 38·6	+75 14	19 07 10	19 14 10			420	
4967	"			19 14	19 21			"	
4968	"			19 21 25	19 28 25			"	
4969	"			19 29 18	19 36 18			"	
4970	"			19 37 00	19 44 00		one line	420	
4971	"			19 44	19 51			420	
4972	"			19 51	19 58			420	
4973	BIAS(4)								
4974	FLAT							THAR A=1/4	23s
4975	Comp							FeAr Clear	120s

Spectr. Temp. ..... Dome Temp./Hum. +5.1°C 68.5% Transparency Conditions ..Ok .. some thin cloud

Focus ....6.90.... should have set for ≈ 6.75 I think but Hdy didn't want to change at start of night. FULL Moon

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
sum of 3				CASS CCD	1800/56°	200u Full Length	Ha	14c;			
	3-4"							15c;	On one line	(14c: 4300 UT, 15 4320 16 4320)	
3000								16c;			
~~30~~								~~17~~		Dome T = +4.8°C	
								17c;			
								18c;		12 k max ADU/pixel	
Sum of 3								19c;			
								20c;			
3080								21c;			
1000								22c;			
sum of 3								23			
								24		some cloud again	
2900								~~25~~ 25c;			
								~~26~~			
								1c;			
								2 6			

11/15

MT3 Thurs-Fri

Date 1991 Nov 21/22 Observers [Mdy] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CCO4976	HD197433	20 38·6	+75 14	20 04 20	20 11 20	W		420 obs	
4977	"			20 11 30	20 18 30			"	
4978	"			20 18 44	20 25 44			"	
4979	"			20 26 20	20 33 20			"	
4980	"			20 33 38	20 40 38			"	
4981	"			20 40 50	20 47 50			"	
4982	BIAS(4)								
4983	Comp							Feat Clear	120s
4984	FLAT			20 53				TUNG A=1/4	23s
4985	HD197433	00 38·6	+75 14	20 54 38	21 01 38	04 09·5 W		420 obs	
4986	"			21 01 50	21 08 50			420 obs	
4987	"			21 09 11	21 16 11			420 obs	
4988	"			21 16 48	21 23 48				
4989	"			21 24 17	21 31 17				
4990	"			21 31 31	21 38 31				
4991	"			21 38 44	21 45 44				

Spectr. Temp. ..... Dome Temp./Hum. +4.0°C 71.5% Transparency Conditions .. part cloudy .....

Focus .. 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800	2"-3"	V 7.3 -7.7		CASS CCD	1800/5620	200u	Ha	26c;	VW Cep_Hdy		
920								27c;			
~1000								28c;		probably lost	
1000								29c;			
1000	2"-5"							30c;			
400	3"-8"							31c;		some cloud → lots of cloud	
								~~32c~~;		Dome T = +3.6°C	
								32c;			
								~~33c~~		11.5 K mag, A04	
sum of 2 exp	3"-10"							33c;			
1500								34c;			
1130	3"-4"							35c;		clear stretch	
								36c;			
1170								37c;			
1200								38c;			
								39c;		some cloud	

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Date 1991 Nov 21/22 Observers Hdy / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc04992	BIAS (4)			2146					
4993	FLAT			214750				Jumc A-1/4	23s
4994	FeAr			21:4930				FeAr Clear	120s
4995	Comp for	HD5394						FeAr Clear	120
4996	FLAT							TUNG A=1/4	23s
4997	HD5394	00 50 40	+60 10 31	220732	222914	0118W			
4998	Comp "			223237				FeAr Clear	120s
4999	Comp (for moon)			224502				FeAr Clear	120s
5000	FLAT							TUNG A=1/4	23s
5001	~~BIAS (4) HD5394 comp~~			~~225500~~	~~225720~~				
5002	Moon (South 60°)			230500	230655				
	~~S 60°~~			~~231245~~	~~231505~~				
5003	Moon S 80°	~~80°~~		~~23~~ 232830					
5004	Moon S 80°	80°		233650	233900				
~~5005~~	~~Moon S 80°~~			~~234250~~	~~234645~~				

Spectr. Temp. ..... Dome Temp./Hum. +3.5°C 75% Transparency Conditions ... Cloudy .....

Focus 6-90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/567	200μ	Hα	1c;			
								40c;		11,2 K	
8800								41c;			
								~~42c~~ 5c;			
								6			
25000		V 2.47	BOTH					7c;	Telluric Std	300 km/sec Vsini in & out of cloud	
								8c; Hα strong emission saturated			
		[All to Perseus & WORK TO & incl CCD 4999.fits]						9c;			
								~~10c~~ 10c;			
								~~11c~~ 1c;			
								11c;		TRAILED IN RA ACCROSS tip my MOON. clouds	
								12c;			
90000				W → East Trail across				13c;	Then East to west		
				~~To E~~				~~14c;~~	~~East-West trail (W→E)~~		

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Pg #5

Date 1991 Nov 21/22 Observers Hdg - Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO5005	moon			23 56 47	00 01 40	00 15E			
5006	BIAS (4) ↑			00 04 21					
5007	FLAT ↑			5 49				TUNG A=1/4	23sec
5008	FeAr comp ↑			7 10				FeAr Clear	120sec
5009 ✓	BIAS (4) ↓								
5010 ✓	FeAr comp ↓			00 51 50				FeAr Clear	120sec
5011 ✓	FLAT			54 19				TUNG A=1/4	23
5012 ✓	HD 197433	20 38 6	+75 14	00 57 28	01 04 28	08 14W		420	60s
5013 ✓	"			01 04 50	01 11 50			420	60s
5014 ✓				01 12 06	01 19 06				
5015 ✓				01 19 25	01 26 25				
5016 ✓				01 26 38	01 33 38				
5017 ✓				01 34 05	01 41 05				
5018 ✓				01 41 18	01 48 18				
5019 ✓				01 48 30	01 55 30	09 04W			

Spectr. Temp. ..... Dome Temp./Hum. +3.8°C ... 74.8% Transparency Conditions ... cloudy - partcloudy ... 20

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
82000				CASS CCD	66020 1800/560	200u Full length	Hd	14c;	7 k [illegible]	W → East Trail, E → W	
								1c;			
								15c;			
								16c;			
								[illegible]1c;			
								19c;			
								20c;		12.0 K ADU max	
600	3"-6"	7.3 ✓ -7.7						22c;			
540								23c;			
586								24c;			
556								25c;		VERY Hazy	
580	4"-6"							26c;			
580								27c;			
800	2"-4"							28c;			
780								29c;		Some cloud	

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pg #6

Date 1991 Nov. 21/22 Observers [Hdy] Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05020	BIAS(9)	HBIAS.BAT							
5021	FLAT							Tung A=1/4	25s
5022	Comp							FeAr clear	120s
5023	HD197433	20 38 6	+75 14	02 01 02	02 08 02				
5024	"			02 08 15	02 15 15				
5025	[illegible]			02 15 29	02 22 29				
5026				02 22 41	02 29 41				
5027				02 30 03	02 37 03				
5028				02 37 16	02 44 16				
5029				02 44 28	02 51 28				
5030				02 51 40	02 58 40				
5031	BIAS(4)	HBIAS.BAT							
5032	Comp			59 50				FeAr clear	120s
5033	FLAT			03 02 20				Tung A=1/4	25sec
5034	HD197433			03 04 24	03 11 24				
5035	"			03 11 40	03 18 40				

Spectr. Temp. ..... Dome Temp./Hum. 13.2°C ... 74% Transparency Conditions .. part cloudy - hazy .....

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD		300u Full Length	Ha	1ci			
								31ci		13k max ADU/pixel	
		V						32ci		max line @ 480 ADU	
600	4"-8"	7.3 7.7						33ci	Halpgm V W Cep		
605								34ci			
640								35ci			
530								36ci			
700	3"-6"							37ci		semi clear again	
sum of 3 exp								38ci			
								39ci			
1960	3"-8"							40ci		v sharp sight limited / pitch / min light	
								1ci			
								12ci			
								13ci			
408								14ci			
511								15ci			

123

pg #7

Emulsion Batches: .....

Date ..1991 Nov 21/22... Observers ..Hdg. I.Tn..... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
CCO5036	HD 197433	20 38 6	+75 14	03 19 59	03 25 59			420 nm		200
5037	"			03 26 12	03 33 12			420 nm		160
5038	"			03 33 24	03 40 24			420 nm		160
5039	"			03 40 36	03 47 36			420 nm		320
5040	"			03 49 00	03 56 00			420 nm		170*
5041	BIAS(4)			03 56 30						
5042	TUNG						TUNG A-1/4	TUNG	25s	
5043	Comp						Fe Ar Comp		120s	
5044	BIAS(4)	HBios								
5045	Comp while on Regulus							Fe Ar Comp	120s	
5046	FLAT							TUNG Comp	25s	
5047	HD 37901	10 03 03	+12 27	04 19 24	04 24 24					2000
5048	"			04 25 33	04 31 27					1000
5049	"			04 32 30	04 40 00			TUNG		80 150
5050	FLAT			04 43				TUNG A-1/4	25s	

Spectr. Temp. ..... Dome Temp./Hum. +32°C ... 71·6% Transparency Conditions ... cloudy ... again ...

Focus ... 6·90 .....

Spectr. Temp. ..... Dome Temp./Hum. +28°C ... 70% Full moon too

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800				CASS CCD			Hα	16i			
760	4"-10"							17i			
460								18i		cloud	
320								19i		shole, closed	
170*								20i		* v cloudy	
										Room T= +32°C	
								22i		13·6 K ADU/pixel	
								23i			
								~~24i~~			
								~~25i~~	24i		
								~~26i~~	25i		
50050		1:37	B7					~~27i~~ 27i	telluric std	cloudy 9K DARK 4DU/pixel	
50700								28i	"	740 DARK 4DU	
80250								29i	"		
								30i			

125 pg #8

Date 1991 Nov 21/22 Observers Holy T.G.

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Mtr.
CCO 5051 V	Comp at end of Reg Exps							FeAr Clear	120s	
CCO 5052 V	BIAS(4)	HBIAS.BAT								
5053 V	Comp for	HD89449						FeAr Clear	120s 60s	
5054 V	FLAT							TUNG A=1/4	25s	
5055 V	HD89449	10 14 3	+19 59	05 00 58	5 09 40	1 24 E				
5056 V	Comp for	HD89449						FeAr Clear	120s	
5057 V	Comp for	VW Cep						FeAr Clear	120s	
5058 V	BIAS(4)									
5059 V	Flat							TUNG A=1/4	25s	
5060 V	HD197433	20 38 6	+75 14	05 25 29	05 32 29	E				685
5061 V	"			32 43	39 43					650
5062 V				05 39 56	05 46 56					710
5063 V				05 47 08	05 54 08					810
5064 V				0554 21	06 01 21					900
5065 V				06 01 33	06 08 33					237
5066 V				06 10 07	06 17 07					125

Spectr. Temp. ..... Dome Temp./Hum. +2.7°C 70% Transparency Conditions ..Mostly..Cloudy..... 126
CIRRUS

Focus ....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
9000						20μ	Hα	31c;			
								1c;			
								33c;			
								~~34c;~~ 34c;			
4500	4"	V 4.79	F6 IV					~~35c;~~ 35c;		std vel	
								36c;			
								37c;			
										Dew T = +2.8°C	
								19c;		Dk 17.4x	
685	3"	V 7.3 7.7						20c;	Hdy pgm V WCap		
650								21c;			
740								22c;			
810								23c;			
~500								24c;		cloudy	
238								25c;		cloudy	
105								26c;			

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pg # 9

Date ..1.9.9.1. Nov 21. 122. Observers ....Hdg....Ftg.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO 5067	BIAS(4)			6 19 50					
CCO 5068	FLAT							Tung A-1/4	FW 25s
5069	Comp ↑							FeAr clear	120s
5070	Comp ↓			6 31				FeAr Clear	120s
5071	HD112028	12 18 4	+83 57 24	6 37 44	6 47 32	2 17 E			
5072	Comp			6 49 49				FeAr Clear	120s
5073	BIAS(4)	HBIas, BAT							
5074	FLAT			6 54				Tung A=1/4	25s
5075	DARK			6 55 07	7 02 07				420s
CCO 5076	FeNe			1425				FeNe clear	20s
5077	FeA			1435				FeA clear	60s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Cloudy .....

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum 12.5°C ... 69.5%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion #2	P.H.	Program	Remarks	Quality
				CHSS CCD	1800/36.2°	200μ	Hα	1c;			
								27c;		13.0Å ADU max	
								28c;			
								29c;			
4700		V 5.28	A1 III	Shell				30c;	shell star	S E ε brighter of pair	
								31c;			
								~~32c~~;	k;		
								32c;			
								33c;			
	All	to	work	/	Porgens	&	up to date		to exa by HC		
					1800/42.2	200μ	4340Å			G:4480	
					1800/42.2	200μ	"			G:4480	

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Emulsion Batches:

Date 1991 Nov 26 & 27/28 Observers KK. Letteman / JG

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE04070/71	Focus Tests								
CE04072/73	" "								
								TUNG	20sec
	FLAT							TiA	10sec
	Comp							TiA	10sec
	Comp							TUNG	20sec
	FLAT								

Notes on other orders

at echelle tilt = 19.30

± x grating tilt .4550

Grating 600 in/mm 5000 Å Blaze

Spectr. Tem
Focus
Spectr. Tem

Exp Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCDT at bottom is -125°C

0 0 128 1024 8 1 CCDTMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp. shift	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Set .236	T=	+0.6°	+1.86	Echelle CCD	600 l/mm x grating					New Collimator	
.200	T=	+0.6°	-0.30	"						Mounting IN	
										x grating = .4550	
					17.00		4478Å	10c	500 PROW	1440 1st → 1714 3700	
							4478Å	9c	4474 set 1022 484	Blaze max Rotated CR 5th complete order From Top	
					19.30		4479Å	11c	4474 @ 1000 484 500 PROW	1. 5th complete order From Top 1440 1st → 5760 484	
					19.30		"	12c	4h	blaze max Left of center	
					14.30		4341Å	Negative		4th order up from 4479Å in 1st complete order From Top	
							~~4588Å~~				
							4585Å			in 2nd complete from bottom	
							4552Å			in 3rd complete from bottom	
(Goto 4383 well in from LH edge)							4374Å			in 3rd complete from top	
	xgrating = .4500				19.00		4484Å	13c		4468Å at Blaze inverted in 4th complete order from Top	
							4555Å			6th compl from Top	
					Echelle F.F.						
	xgrating .4530				18.96					Ideal for Fds setup 5th complete from Top	

,131 pg #1 Thurs - Fri Echelle Flexure Tests after recent Collimation changes

Emulsion Batches:

Date 1991 Nov 28/29. Observers ....T.n..... refer to 1991 encoder posns recorded Feb 11/12 00 Hr L circle.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD4074	BIAS(4)			1858					
4075	0°0, 6E Ech Flexure			1900		0557E	0°	ThA	20sec
4076	0°0, 5E			1911		05	"		
4077	4E					04	"		
4078	3E					03	"		
4079	2E					02	"		
4080	1E					01	"		
4081	00 meridian					00	"		
4082	01 W					01W	"		
4083	02 W					02W	"		
4084	03 W					3 W	"		
4085	03 53					3 53W	"		
4086	@ 09hrs East					9 E	+45°		
4087	8 E					8 E	"		
4088	7E					7 E	"		
4089	6E					6 E	"		

Spectr. Temp. ..... Dome Temp./Hum. +2.6°C .65% RH Transparency Conditions ... Cloudy .....

Focus ... .200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... ~~32~~ 32 0 64 1024 8 1 CCDTemp

CCDT left at bottom (0 CGAIN) (motion of plate, mirror heard to turn

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600/mm .4530	.281 width ≤ 60μ .225 Height = 900μ		1c:		41H Echelle grating 1850	
								3c:		Stopped into m. 4200 CCDT before exp to Recover from	
								4c:			
								5c:			
								6c:			
								7c:			
								8c:			
								9c:		Emission Dome → west before this exp	
								10c:		CCDT = −128.5°C	
								11c:			
								12c:			
								13c:		Dome Rotate → next Horizon Exp	
		Noted Dome to be rotated from: NW → N → ~~NE~~						14c:		After unsuccessful attempts on Dome upper platform	
								15c:			
								16c:			
								17c:			

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continued Echelle ccd flexure tests.

Emulsion Batches:

Date 1991 Nov 28/29 Observers LT

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo4090	5 hrs East					5 E	+45°	THA	20s
4091	4 E						"		
4092	3 E						"		
4093	2 E						"		
4094	1 E						"		
4095	0 Omeridian (zenith)						"		
4096	1 hr West						"		
4097	2 W						"		
4098	3 W						"		
4099	4 W			2110			"		
ceo4100	5 W						"		
4101	5 55 W					05 55 W Limit almost	+45°		
4102	BIAS(4)								
4103	FLAT					02 30 W	+24°	TUNG	50s
						(Spots & Bands wide)			

Spectr. Temp. ..... Dome Temp./Hum. +2.3°C 66% RH Transparency Conditions ... Snow 134

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD		L 60μ H 400μ		18i		Moved Dome 1° → N E before exp.	
								19c			
								20			
								21c			
								22c			
								23c		Dome To N W before exp	
								24c			
								25c			
								26			
								27c			
								28c			
								29c			
								1c		Dome T = +2.3°C	
						L 60μ 7.28 spot H=600μ 2.05		30c		10 K non-flexible	
*	Note - as seen + Flat, Definitely flares		48-49		absorbing		(WATER)	2 pixels 23		367 or 4993 - 4973 Å no change since Metal contact.	

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SAT - SUN pg#2

Date 1991 Nov 30/Dec 1 Observers [illegible] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC04104	Comp Clone after 1st exp. No beginning Comp							ThAr	10s
CC04105	HD 34029	050918	+4554	20 3410	20 3917	4 17E			307s
4106	Comp another after long 4104 for Luck							ThAr	10s
4107	BIAS(4) done much earlier								
4108	BIAS(4)			2049					
4109	FLAT			~~20 56 40~~		04 00E ~~04 hrs E~~	+46° ~~+46°~~	TUNG	10s
4110	FLAT(6) made up later.			FLAT 6.7s		average of 6 flats	each of 6 exp	TUNG	7s
4111	Comp			22 27				ThAr	10s
4112	HD 34029	05 0918	+45 ~~54~~	~~22~~ 2857	22 4347				390
4113	Comp							ThAr	10s
4114	HD 34029	05 0918	+45 ~~54~~	22 4956	23 0356			390	14 mins
4115	Comp							ThAr	10s
4116	BIAS(4)								
4117	Comp								
4118	HD 34029	05 09 18	+45 ~~54~~	23 2410	23 3910	01 17E			900s

Spectr. Temp. ..... Dome Temp./Hum. +6° ..... 66% of 2030 CST Transparency Conditions ..Cloudy...with holes.....

Focus ...+200.....

Spectr. Temp. ..... Dome Temp./Hum. ..... 5000 Å Blaze λ Regions

0 0 256 1024 4 1 CCD1 mT

90 CGain T: ccd = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm .4530	90u 600u Length	4340Å → 4600Å	0 (Fit's criteria)		Echelle Tilt = 1890	
900		B= 0.89	G81(1) + F					3ci	Cape's	Sum of 3000 ADU from 4 regions Cloudy @ 4487 Region	
						90u 500u length		4ci		12 k max/pixel	
						"		1-3ci		9 k max/pixel	
						90u 600u length equiv.		7ci			
1600	Prob v poor	.13 0.89				"		8ci	kk pgm	Some cloud MAX: 1700 ADU/pixel at bottom left	
								9ci			
5000						90u = .265 600 Length		4ci		5800 MAX ADU/pixel	
						"		5ci			
								1ci		Some T = +4.9°C	
						60u = .277 600 Length 60u slit width		5ci	Slit width	changed	
5650								5ci	kk pgm	good hole in clouds	

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pg #2

Emulsion Batches: .....

Date 1991 Nov. 30 / Dec. 1 Observers ....TG..... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04119.fts	Comp for Capella							Th Ar	10s
4120	FLAT (6)	using FLAT6.7s				2 57W	+46° 06	JUNC	7sec
4121	BIAS(4)					6 x 7secs (avg)			
4122	FLAT(6)	using FLAT6.10s				0 00E	+46 06	THNC	10sec
4123	DARK 15min	after Topup		00 28		2 51W	+9°		900s
workm copy test	4104 thru	4109 (6 files)		00 40 50	00 42 08	(Dark running in Echelle CCD)			
				00 46 30	00 47 33				
(Copy ce0411.fts To Debris as a check				00 56 14	00 58 40				
				(146 secs 14 files)		Echelle CCD window and			
	ce 04110 - 4123 To workm			01 35 05	01 37 30	(approx avg) [illegible] maybe 01 37 10			
				14 files x 10 secs per.					

Spectr. Tem
Focus .....
Spectr. Tem

Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. +4.4° 67.7% Transparency Conditions ... Real Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

No chance for a std tel or anything else.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD		60u 600 Length = .205				CCDT = -101.9°C	
						60u width 800u length = .185				MAX ADU/pixel = 6000	
										Dome T = +4.4°C	
						60u 800 Length			Aug of 6 10 sec flats	MAX ADU = 9000	
										1st one around very slow? (15 secs each) average 7½ sec for 6 (523, 168 ½, & 6½)	
Econ window up too, copy as today, DC from BIGDOS - worm									1st one took 15 secs		
All backed up on Persons now.											
Econ window still up							ccd 4110 → 4123 → Persons from Bigdos window.				
Using DOS services (working method)										ECON & Echelle ccd windows brought up again.	
										∴ 3 windows in all.	
				All now on WORM too							

139 fg #1 wed Thurs

Date 1991 Dec 4/5... Observers [J.G.]...Th.../Sa.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~CO5078~~	Comp						OG560	FeNe Clear	10s
~~CO5079~~	Comp						OG560	FeAr A=1/4	10s
5080	HD204848			180500	182500		OG560		
5082	"			183500	184518		OG560		6/30s
5081	~~Comp~~ BIAS(4)	before exp 5082 and at 1st		CCD FMT					
~~5083~~	~~HD204848~~	~~no good.~~		~~184712~~	~~1850~~				
5085	HD204848			185435	190157				3/40
5084	HD204848			190822	192757		OG560		1/15s 10/30
5085	Comp						"	FeNe Clear	10s
5086	Comp						"	FeAr A=1/4	10s
5087	BIAS (over)								
5088	Comp						OG560	FeAr A=1/4	10s
5089	Comp						"	FeNe Clear	10s
5090	HD221170	23 24.6	+29 53	194624	202124	01 28W	OG560		2/30 3/50
5091	Comp							FeNe Clear	10s

Spectr. Temp. ..... Dome Temp./Hum. ~ 5°8C ... 60% Transparency Conditions .....

Focus 6.90 changed to 7.05.

Spectr. Temp. ..... Dome Temp./Hum. .....

Format No good - Spectrum is to far E
→ 360 0 30 1024 4 1

90 CCD GAIN VERY poor seeing

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=3970 831/377	200μ Full Length RANGE 7544 - 7980Å					
H480	8"							3c;	rG pgm	nothing	
480								4c;		300 0 60 1024 9 1	CCD Format
								5c;			
340								5c;		image of bottom of field 200 0 120 1024 4 1	CCD Format
1030	8"	7.41	K3V Fe-4	GH+1	Sum AVG cont of 10 pixels above cont = 9K ADU			7c;	88-98 columns	300 0 160 1024 4 1	
								8	Note* Spectrum of Star displaced		
								9	on chip below comp spectrum		
								7c;	by ± 40 actual pixels		
								9c;	That must be the Refraction Rel to T.V. Field		
								10	70-90 cols		
2150	6-8"	7.66	K0III Fe-3					11	rG std	(84-94 cols)	

141 pg #2

Date 1991 Dec 4/5 Observers [illegible] T.G.

Emulsion Batches:

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..... FILTER .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination ORIENT Sep	Comparison Type/Filter	Comparison Exp.
CCO5092	Comp	at + 30° Dec				01 32W	OG560	FeAr A=1/4	10s
5093	BIAS(1)								
5094	BIAS(1)								
5095	FLAT	at + 30°				01 40W	OG560	TUNG A=1/4	20s
5096	FLAT	+ 30°				"	OG560	"	28s
5097	Comp when @ HD 33328					03 45E	-8° 53	FeNe clear	20s
							OG560	FeNe clear	
	Focus Tests	Comp / stellar hartman posns rejected				0 0	+4°	FeNe clear	10s
	(Both written text shows a UV slight Blue shift of stellar posn)								
CCO5096 UV 5098 ✓	Focus tests			2157		0 0	+4°	FeNe A=1/4	10/10
CCO5100 ✓	BIAS(4) after resetting CCD computer			300	0 160	1024	4 1 COUNT		
5101 ✓	Comp						OG560	FeNe clear	10s
5102 ✓	HD 33328	05 04 22	-08 57 56	23 32 08	23 37 00	00 55E	05 560		300s
5103 ✓	"	"	"	93 40 31	93 50 17	0041E	"		

Spectr. Temp. ..... Dome Temp./Hum. -9.8°C..64% Transparency Conditions ...Cloudy in...

Focus .....7.05.....

Spectr. Temp. ..... Dome Temp./Hum. .....

300 0 160 1024 1 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD						CCD T = -101.8°C	
										1	
									70-108 columns	8400 ADU MAX (prior)	
									"	12,300 " " "	
								14ci		* Comp between 16-36 columns	
		Dome T with dome closed = -8.3°C sp Temp prob -8°								Comp at +30° and the worst	
Comp	Still	at 16-36 th columns		at 300	0 160	1024	1 CCD FMT			was between 68-88 columns	
(comp)				Rapid	Temp drop	tonight,			Set 7.05	That is ≈ 200 intrinsic column shift!	
										not much shift at ROIs though	
170 0	CCD FMT 8 1024 60.1			CASS	G=3960	200μ		16ci			
				CCD	831/37.7	Full Length		17ci	set 7.05	Right on!	
at about 23 EST					"				Had to reset as Emimage on last		
		V			"		14-44 cols	3ci	cache hung me up.		
2150	5"	4.77	B2 IV	ne	"		30-46 cols	4ci	telluric std	some clouds	
5500	3.70"	"	"		"			3cl	8500 " "	guided	
										V slit = 335 microns	

(≈ 45K ADU sum/AVG of 10 columns).

143 pg #3

Date 1991 Dec 4/5 Observers [illegible] Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 05104	v Comp			23 55			06 56 0	Fe/Ne Clear	10s
5105	v FLAT			23 58		00 33E	"	Turq A-1/8	
5106	v FLAT					00 30E	"		
5107	v BIAS(4)			00 20					
5108	DARK 10m			00 22	00 32				10min
	Dec 6/7	Just Focus Test Tin							
cc 05109/10	Focus Test	Comp/Stellar pairs,		00 EST		1 35 W	+14°	Fe Ar Clear	40/40
	1st setup	comp A range visual						Fe/Ne Clear	Fe
	Comp Test							Fe/Ne Clear	60sec

Spectr. Temp. ..... Dome Temp./Hum. -8.7°C ..7.0% Transparency Conditions ... Part. cloudy .....

Focus ..... 7.05 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=3960 831/377	200μ Full length		5i			
								6ci	15-50 cols	MAX ADU/pixel = 14K	
								6ci		14K in ~ @ 36 cols	
$\bar{x}$ = 1.43	1.748	~ 1.419	default box stats					1ci		Dome T = -8.6°C	
								7ci			
						All to w.p.w. - persons --					
(Stellar	Pad time	1.3 pixels)		CASS CCD	G=6048 1200/563	200μ Full length	HK	5ci/6ci	Focus Test	T = -3.0°C Set 7.05	
	Should be		set @ 6.85	for	-3°C	will do	depending on when obs next.				
							λ central		To Persons c. weekend TOO		
					G=2550 600/24.9°		3700Å	7		12.333 Å/G mm.	
2.2000					G=2500 600/25.0°		4070Å	1ci			
					G=2566 600/25.0°		4000Å				
* After going to G=2400 and advancing back up					" G=2566* 600/25.0		" 4020Å	3ci/4ci	T = 7.3°C set 7.05	Stellar fwhm < 1 pixel	

145

Mon - Tues

Date 1991 Dec 9/10 Observers Fich / Tu

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Comp Tests (unwritten)								
								Ti Ne Clear	20sec
								Fe Ne Clear	
CCO5111 5112	Focus comp pos / stellar pos			OEST		01 W	+	Fe Ne Clear	20/20
								Ti Ne Clear	40sec

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ....Cloudy...mostly..... 146

Focus ...7.05.....

Spectr. Temp. .Dome T.=+2.5°C Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=2545 600/24.7	200u	3920Å	6ci		ie going below after reducing G from previous set	
					"			1ci		510 0 60 1024 4 1	
					"			2ci		slit 120 = 2.3 mm slit 120 in last column	
	400				G=2545	200u		1ci			
		0	10	1024 40 1	600/21.8	full length	3900	3ci	office homing	Grating first	
					stellar Hartmann s/Rat ~.5 pixel					Comp exposure ~ 30 seconds	
				Felle source giving comp on col #13-35					Comp from col #13-45 single edge		

,147 pg #1 Tues-Wed

Date 1.9.91. Dec. 10/11.... Observers ..Fich./.T...../.Shea..

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05113	BIAS(4)	Average of 4							
05114	Comp							FeNe Clear	40s
05115	S128	21 30 36 (1950)	+55 38 41	18 23 36 (13.20 secs)	18 45 36	02 13 W	+55 57 06		
05116	SKY	21 31 53 (Encoder or Telescope)	+56 07 39	18 49 10	19 12 00	02 40 W		13 Clear	70 secs
05117	S128	21 30 36 (1950)	+55 38 41	19 14 10	19 01 10	03 28 W			
05118	SKY	21 31 53 (encoder)	+56 07 27	20 03 3?	20 48 34	04 16 W			
05119	Comp							FeNe Clear	40s
5120	BIAS (4)	Average of 4 bias taken on S128							
5121	Comp for	S212						FeNe Clear	40s
5122	S212	04 36 50 (1950)	+50 21 35	21 05 30	21 25 30	02 15 E			
5123	SKY 10min	South of	S212	21 28 07	21 48 07				
5124	Comp			~~21 28 07~~				FeNe Clear	40s
5125	S212	04 36 50	+50 21 35	22 02 30	22 09 30	01 31 E			40s
~~5126~~ 5126	FLATS x3	CC05126 - CC05128				01 24 E		Twilight Clear	28s
5129	BIAS (4)								

Spectr. Temp
Focus ...6...
Spectr. Temp

Exp Mtr	S
40	
50	
30	
80	
30	
44	

Spectr. Temp. ..... Dome Temp./Hum. +2.8°C 71% Transparency Conditions ... Hazy ... part. cloudy ...

Focus ... 6.95 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... [90 CCD Gain (CCD T → +10°C)] RA = 0 04 Dec 0 7 36 off star list

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=2545 600/24.8	250 Full Length		1c:	510 0	60 1024 4 1 CCDFAST	
a							3900Å	3c:		MAX 3640 ADU on line	
≈50				36-39 (obsok)			"	4c:	HII pyn	5 sec int slewing objects	
≈30								5c:	SKY	10 in field North of previous exp	
80								6c:	HII pyn	5 5 30 sky and	
80								7c:	SKY		
										from T = +2.2°C	
								8c:			
44								9c:	HII Region	(bt field star 12 arcmin NE of)	
								10c:			
								~~11c~~			
								11c:	HII Region		
								12-14c:	Flats	MAX Apic = 10K [illegible]	

149 pg #2 Tues-Wed

Date 1991 Dec 10/11 Observers Fich / T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05130	Comp							Fear Clear	80s
5131	S 212	07 36 50	+50 21 35	22 29 15	22 38 15				
5132	SKY with cloud	10 min	South of	~~22 48~~ S212	23 09	00 31E		1260 sec	
				~~22 48~~	~~23 09~~	~~00 31E~~			
5133	S 212	04 36 50	+50 21 35	23 13 40	23 25 40	00 15E		720 sec	
5134	Comp							Fear Clear	80s
5135 5137	FLATS	at S212 posn						TUNG A=1/4	20s
5138	Comp							Fear Clear	50s
5139	S212			23 41 25	23 51 25	00 11W		600 secs	
5140	SKY			23 53 15	00 43 15	01 03W		3000 secs	
5141	~~Comp~~ SKY	10 min	south of S212	00 46 00	01 08 00	01 28W	(1320 sec)	~~Fear~~ Clear	~~50~~
5142	Comp							Fear Clear	50s
5143	BIAS(9)								
5144 5146	FLATS							Tung Clear	15s
5147	Comp							Fene Clear	40s

Spectr. Temp. ..... Dome Temp./Hum. +2.2°C 80% Transparency Conditions ..... Cirrocu .....

Focus ..... 6.75 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... FORMAT for 1800 l/mm grating 460 0 60 1024 9 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G: 6020 1800/	250μ full length	H-α	~~15c~~		460 0 60 1024 9 1 CCD Fmt	
								16c;	HII Region	447 555 Hα	
								17c;	SKY		
								~~15~~c;	HII region		
								~~16~~			
					~~G 6050~~		Hα	18, 19 20		12K max/pixel	
				CASS CCD	G: ~~1850~~ 1800/		4960Å	21	~~HE Region~~		
13								22c;	HII Region		
37								23c;	"	Some cloud	
13								24c;	SKY	Some cloud	
								25c;			
					~~1460~~					Zone T = +2.3°C	
								~~26c;~~		12K max/pixel	
					G: 1460 1800/		4360Å	27c			

151 pg #3

Emulsion Batches: .....

Date ...11/...Dec 10/11.. Observers ...Fich../Tay..... .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO5148	S212	04 36 50 (1950)	+50 21 35	01 26	020700	2 27 W		2486	4 min
5149	SKY 10 deg min South			02 13 22	02 30 22	2 51 W			17 min
5150	Comp							FeNe Clear	40s
5151	Comp (near Trapezium)							"	9
5152	Orion Nebula	05 32 15 (1950)	-5 28	02 50 30	03 00 30	2 26 W		Tilt Clear	
5153	FLAT							Fe Ne Clear	-?
5154	Comp							Fe Ne Clear	40
5135	Orion Nebula	[≈40 sec North of TRAP]		03 15 50	03 35 50	3 02 W			20 min
5156	Comp							12/Ne Clear	40s
5157	BIAS (4)								
5158	SKY	06 18 09 (Ecliptic Pole)	15 25 29	03 48 15	03 59 20				11 mins
5159	"	"	"	04 03	04 23	3 06 W		1280 Clear	5 min
5160	FLAT	"	"	04 26					5 min

Spectr. Temp. ..... Dome Temp./Hum. +2.3°C .. 81% Transparency Conditions ... Partly cloudy .....

Focus .... 6.95 .....

Spectr. Temp. ..... Dome Temp./Hum. +2.0°C .. 81% Row # 144 gives a false reading ??

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	~~CASS~~ CCD	250u Full	4360Å	~~29~~ i	4340 should be 4360	i: 4460 Range 1800 — (4255 – 4465 Å)	
								29 i			
								~~30 i~~		CCDT = -99°C	
							4360Å	30	2 40 apertures NORTH of Tip, 02 iron		
								31			
					G 4100 1800/	250u Full	3800Å	~~32~~			
							"	32	# 11 rotation from		
							"	~~33~~			
							"	1c		Dome T = +2.2°C	
							"	34		Rotating Soon	
							"	35		PARTLY CLOUDY	
							"	36		10 K ADU MAX	
				All to work on 2 PGA scans after						Extensive CED-125 editing	

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pg # 1 Wed - Thurs

Date 1991 Dec 11/12 Observers [I.G.] Jes

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05161	BIAS(9)								
5162	Comp						OG560	FeNe A=1/4	20s
5163	HD204548	21 26.2	-10 11	17 21 47	17 25 47	0 57.5W	OG560		
5164	HD "			17 27 10	17 47 10	0 19W	"		
5165	Comp						"	FeNe A=1/4	20s
5166	Comp for						"	"	"
5167	HD221170	23 24.6	+29 53	17 57 44	18 11 44	00 14E	OG560		
5168	Comp						OG560 A=1/4	FeNe	
5169 5171	FLATS (3)	(+10° Dec)		18 20		0 13W	OG560	A=1/4 TUNG	8sec
5172	Comp						OG560	FeNe A=1/2	2s
5173	HD204848	21 26.2	-10 11	18 30 40	19 00 40	02 33W	OG560		
5174	Moon region			19 06 40	19 12 40	02 42W	"		2s
5175	Comp							FeNe A=1/2	20s
5176	HD221170	23 24.6	+29 53	19 23 53	19 43 53	W	CC05176 Comp	"	20s
5176	Comp							"	20s

Spectr. Tem
Focus
Spectr. Tem
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. 15°C 61% Transparency Conditions ..... Fine

Focus ..... 6.95 (should be ideal)

Spectr. Temp. ..... Dome Temp./Hum. .....

90CCAin T_CCD = -100°C

Format

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=1200 831	200μ Full Length					
							8570Å				
450		V 7.41	K3 V Fe-4 CH+1						rGpgm	Sky still strong near crescent moon	
1700	3"-4"								"	~10 ± total and BG over 10 columns about legend	
										3200 ADU MAX	
2000	2"	V 7.66	KO II Fe-3						std star	13A surveys above legend — 5 columns	
8 x 20	each						3570Å			MAX 11K ADU/pixel	
	2"				G3900 831	200μ Full Length	7400Å				
2110	3"-4"	V 7.71					"		rGpgm	Guided 1" slit image	
2000							"		manual		
							"				
2800		V 7.66	KO II Fe-3				"		std star		

155

pg #2

Date 1991 Dec 11/12 Observers MKI / J.T.H

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05179 5181	FLATS 3				06560	01 35W	+10°	TUNG R-1/8	20s
5182	Comp						06560	FOG R-1/2	20s
5183	HD 33328	050427	-085256	20 1400	202400	03 41 E	ORDER Sep 06560		10 min
5184	Comp						"	FOG A-1/2	20s
5185	Comp				(exp 20?)		"	FOG A-1/4	20s
5186	HD 33328			203375	204725	03 18 E	"		
5187	Comp						"	FOG A 1/4	20s
5190	FLATS								
5191	BIAS(1)								
5192	" "			21 34					
5193	~~HD 33328~~ Comp	Comp						FOG Clear	90s
5194	HD 33328	050427	-085256	215010	215710	2 08 E	none		
5195	Comp							FOG Clear	90
5196	Comp							"	"
5197	V471 Tau	034443	4/6 57	22 10	223000	00 16 E			

Spectr. Tem
Focus ... 6
Spectr. Tem

Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. +3.0°C 70% Transparency Conditions ..... Fine .....

Focus ... 6.95 → 6.80 for 1800 l/mm grating - clouding in

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	831 G-3990	200μ Full	7900A	19 ci 21ci ~~22ci~~		MAX 10 e⁻/pixel	
4500	5"	✓ 4.27	B2IIIne					22ci	Telluric Std	7000 max 400 e⁻/pixel a sini = 336 kms	
								~~22ci~~			
					G 4200 831/39.8°		8570A	~~23ci~~			
7000								23ci	Telluric Std for 8570A		
								~~24ci~~ ~~26ci~~			
								24 25 26		Prime T = 71.5°C	
Spect	Focus, clamps!			to 6.80	G 6330 800/56.2°		Hα	~~27ci~~		ccd Font change 460 0 60 1634 4 7	
8200	5-8"	✓ 4.27	B2IIIne					27ci	Telluric Std	MAX 3000 e⁻/pixel 5000 Good	
								~~29ci~~			
		✓ 4.97									
550	3-5"							~~3550~~	V471 pyr	Lots of Sky lines above background	Poor

157 PGH 3

Date 1991 Dec 11/12 Observers MKi/JTa

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO5198	V 471 Tau	03 44 43	+16 57	22 30 53	22 50 53				1200s
5199	"			22 51 47	23 13 00	00 27 W			
5200	Comp							FeAr Clear	90s
5201	V 471 Tau			23 17 48	23 37 48	00 52 W			1200s BS
5202	V 471 Tau			23 39 00	23 59 00	01 13 W			
5203	"			00 00 05	00 20 05	W			
5204	Comp							FeAr Clear	90s
5205	BIAS (4)								
5206	V 471 Tau			00 24 00	00 44 00				1200s BS
5207	"			00 44 20	01 04 20				
5208	"			01 05 10	01 25 10	2 39 W			
5209	Comp								
5210	BIAS (4)								
5211 5213	FLATS x3							TiAlG + V4	20sec
5214	V 471 Tau			01 34 26	01 54 26			1200	5s

Spectr. Temp. ..... Dome Temp./Hum. +1.5°C ; 66% RH Transparency Conditions ... mostly clear .....

Focus ... 6-80 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	3"-4"			CASS CCD	1800/5.7	200μ Full Length	Hx	29 ci		5 min 1000 sec clear beyond 5000 Å	
591								30 ci			
								~~3 ci~~			
475								31 ci			
630								~~3~~ ci			
750								~~6~~ ci			
								~~7~~ ci			
								1 ci		Dome T = +1.6°C	
750								~~7~~ ci			
700								~~8~~ ci			
740								~~9~~ ci			
								10 ci			
										10 k + 20 Ar	
628								1½ ci			

159 Pg #4

Emulsion Batches: .....

Date 1991 Dec 11/12 Observers Mk. / Tom .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
C05215	V471 Tau	03 44 43	+16 57	01 54 50	02 14 50					720
5216				02 15 00	02 35 00	3 49 W				
5217	Comp							Fe Ar Clear	90	
5218	Bias (4)									
5219	V471 Tau			02 39 20	02 59 20			120 Cs		425
5220	"			02 59 47	03 19 47			Exp cal	120	950
5221	Bias (4)			~~03 20 00~~	=323					
5222	Comp							Fe Ar Clear	90	
5223	FLATS x3							Tungs H-1/4	20	
5224	Comp for	IRWC 560						Fe Ar Clear	90	
5225	IRWC 560	07 21 01	-07 32 12	03 51 30	04 11 40	01 51 W			45 min	333
5226	Comp							Fe Ar Cled	90	
5227	Comp							Fe Ar Clear	20	
5228	IRWC 560			04 20 14	04 50 14	02 39 W		1200	525	720
5229	Comp							Fe Ar Cloud	20	

Spectr. Temp. ..... Dome Temp./Hum. +13°C 57% Transparency Conditions ... Fine ... slt hazy .....

Focus ..... 6.80 (stiff, ideal)

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
720				CASS CCD	G=6000 1800/562	200	Hα	15			
								16			
								17		CCD T = -103°C	
								18		Dome T = +12°C	
425	3"							19		some cloud 12:45 some clear CCD T = -102° Temp ok	
250								20			
								21			
								22		CCD T = -102.5°C	
								23-24			
										Temp low by 03:30	
333							Hα	26	Mike pgm	3200 max Hα	
								~~27~~ 1		3	
					G476 1800		Hβ region	25			
320							4845 Å central	30	Mike pgm	300 Hα max	

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pg 55

Date 1991 Dec 11/12 Observers MM / J.T.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD5232	v BIAS(4)								
5235	v FLATS x 3	-				0236W	-7 41	T-MG Clear	25 sec
5236	v BIAS(4)								
5237	v Comp							Fe Ar Clear	20s
FM CCD 18.Tn	HD 90861	102417	+290535	0514	4 frames	00 07E	"Log" Mode	*	
5238	v "	"	"	05 1552	05 2552				10 min
FM 19.Tn	"	"	"			00 06W	"N" Mode		
5239	v Comp							Fe Ar Clear	30s
5240	v BIAS(4)								
5241	v DARK 3ci	DARK BAT start		0611 AM					30 min
5242	v " 4								30
5243	v " 5								30
5244	v BIAS(4) 6								

Spectr. Tem
Focus ....
Spectr. Tem

Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. -0.2°C 70% Transparency Conditions ... poor cloudy ... 12
Focus ... 6.80 ... - Hazy
Spectr. Temp. ..... Dome Temp./Hum. -0.4°C 63%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G4700 1800	300u	4845 I				
						Full Length		~~3c, 5c,~~		p:4x-11K 40u/pixel	
								7c,			
55x55	Pixels	V 6.9	K2 III	67m sec Test	(1/1:32)	Ripped Right 3+ 200u slit			Seeing Test	Light SE breeze	
2050	4"	"	"				4845 I	8c,	Stellel		
55x55		"	"	"	"	"			Seeing Test	Pointing Std	
								9c,			
	Backed up to Perseus w/o Run To							CC	05239.fts		
									5161-5199 not edited to fit seeing		
								but	all edited	To warm. (ie exp times)	
						All	to	CC	05244	Dec 12 To	

1163 Pg #1 Wed-Thurs

Date .1991. Dec 18/19.... Observers .Holey. J. Mikl. T. Lu.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Spectr. Temp. Exp. Mtr.	Spectr. Temp. Scale
ICCO5245	V. Comp			17 50				Fe Ar CloudR	90s		
5246	BIAS (4)										
5247	CV Cyg (Hα)	19 44 [illegible] 1993	+[illegible]38 0:57	18 13 30	18 28 30					158	
5248	FLAT							TUNG H=1/4	30s		
5249	CV Cyg (Hα)	19h 50m 45s 1900	+37° 47.1	18 39 28	18 49 33				600	113	
5250	CV Cyg (Hα)			18 50 00	19 10 00				~~900~~ 1200	224	
5251	BIAS (4)			19 11 31							
5252	FLAT			19 13 50							
5253	COMP (Hα)			19 15 25						637	
5254	COMP (Hβ)							Fe Ar CloudR	40s		
5255	FLAT (Hβ)							TUNG CloudR			
5256	BIAS (4)			[illegible]							
5257	CV Cyg (Hβ)			19 26 20	19 46 34				1200	142	
5258	CV Cyg (Hβ)			19 46 57	20 02 47				950	201	
5259	FLAT										
5260	COMP (Hβ)										

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ... 7.20 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CCD T set to −100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					G=6000 1800/	300μ Full Length			(FORMIT	460 0 60 10⅞ 4 1)	
							Hα				
158					G=6000			3c:		STREAK AT ROW 144 FIRST DIGITAL SPECTRUM OF THIS STAR EVER! 392-449 ⇒ Hα	
								4c:		MAX 14,800 ADU/pixel	
113								5c:			
234								6c:			
								7c:			
6934								7c:			
					G=4760		4845Å	8c:			
								9c.			
243								10c:		240-300 ⇒ Hβ	
201								11c.			
								12c.			
								13c:			

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Pg #2

Emulsion Batches: .....

Date 1991 Dec 18/19 Observers Hdg./Mk./Tq...t (Kamran monitor student) .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
cc5261 HS	BIAS (4)								
5262	COMP (HS-CaK)			[redacted]					
5263	[redacted] BIAS (4)								1000s
5264 ✓	CV Cyg			20 35 20	20 52 20				17 min
5265 ✓	CV Cyg			20 53 11	21 13 11				120s
5266 ✓	FLAT								
5267 ✓	FLAT			21 17 52					
5268 ✓	BIAS (4)			2125					
5269 ✓	Comp	for HD220657						FeNe Clear	60s
5270 ✓	HD220657	23 2023	+57 00	21 38 57	21 44 57	3 51 W			
5271 ✓	Comp							FeNe Clear	60s
5272 ✓	Comp Hβ				(64) 360s			FeAr Clear	90s
5274 ✓	HD220657			21 57 30	22 03 30	4 10 W			6 min
5273 ✓	BIAS (4)	(done before 5273)		21 54					
5275 ✓	Comp							FeAr Clear	40s

Spectr. Temp. ..... Dome Temp./Hum. ~13°C ~52% RH Transparency Conditions ... Hazy .....

Focus ... F/20 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/	200μ Full2	Range 3910-4130				
					G=4235			13c		good for CaK→H δ Hδ	
222								~~11c~~			
269								~~18c~~ 18i			
								~~15~~		2200 ADU MAX	
								~~16~~			
										Max = 840 ADU/Pixel	
10000	6"	V 4-5	F8 IV					15c	Std Star		
					5 4235			16c			
					G 4700		4845Å	17c			
3800								18c			
								19i			

K7 pg #3

Date ..1991. Dec. 18/19. Observers .Hdg. J. M. Ki. J. Tu.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05276	FLAT							Tung Clear	25s
5277	BIAS(4)								
5278	Comp							Fe Ar Clear	90s
5279	HD220657	23 20 23	+22 31 00	22 16 56	22 22 56	4 29 W			
5280	Comp							Fe Ar Clear	90s
5281	FLAT							Tung 11-1/4	25s
5282	BIAS(4)			22 28					
5283	Comp for	V471 Tau		~~22 52 04~~				Fe Ar Clear	90s
5284	V471 Tau	03 44 13	+16 57 06	23 52 04	23 12 0[illegible]	0 54 W			120s
5285	"			23 13 00	23 33 0[illegible]				120s
5286	"			23 33 40	23 53 40				120s
5287	Comp							Fe Ar Clear	90
5288	BIAS(4)								
5289	FLAT			~~00 05 20~~	~~00 25 20~~				
5290	V471 Tau.			00 05 20	00 25 20				120s

Spectr. Tem
Focus .....
Spectr. Tem

Exp. Mtr

Spectr. Temp. ..... Dome Temp./Hum. -11°C 53% RH Transparency Conditions ... Hazy ... 68

Focus ... 7.20 ...

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 4760 1800 l/mm	200	4845 A			14 K max	
					G 6000 1800		H2				
9163		✓ 4.5	F8 W				"	20 ci	Std Star	3500 ADU max 400 pixel	
							"	~~40~~			
							H2	~~24~~		14 K max	
886								21 ci		Significant moonlight/haze	
783								22 ci			
~~88~~	6"							23 ci			
								24 ci			
~~950~~											
950								24 ci			

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Date 1991 Dec 18/19 Observers MKi/JTh

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CCD5291	V471 Tau			00 27 00	00 47 00				120	120
5292	"			00 48 15	01 08 19				120	
5293	Flat							Tung F-1/4	25s	
5294	BIAS(4)									
5295	Comp							FeAr Clear	90s	
CCD5296	Comp									
5297	VMWC 560	07 21 01	-07 32 12	01 40 00	01 24 02 10 00				1800s	450
5298	"			02 10 40	02 40 40				1800s	420
5299	Comp							FeAr Clear	90s	
5300	Flat							Tung F-1/4	25s	
5301	BIAS(4)			0242						
5302	Comp HA							FeAr Clear	40s	
5303	VMWC 560			02 52 20	03 22 20	W			1800	420
5304	"			03 23 10	03 53 10	07 00 W			1800	440
5305	Comp							FeAr Clear	40s	

Spectr. Temp. ..... Dome Temp./Hum. -14.2°C 54% Transparency Conditions Hazy 170

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
900.				CH5 CCD	G 3000 1800/	200μ Full Length	Hα	/		Strong moonlight.	
								25c;			
								3c;		11K 114X	
								5c;			
								6c;		1300 42" N48 @ Hα	
350	6"-10"							7c;	Nth. prgm	West of fork- Sep 3 2nd night	
230	4"-10"*							8c;	"	*or most nights of trip	
								9c;			
								12c;			
					G 4760		Hβ	13c;		center @ 4845Å	
420								13x;			
440								14c;			
								15c;			

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Emulsion Batches:

Date ...Dec. 18/19..... Observers ...Mtt../Tuy.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05306	FLAT							TUNG Clear	25s
5307	BIAS(4)								
5308	MWC560			04 02 40	04 32 40	2 40 W			1800
5309	FLAT							TUNG Clear	25s
5310	Comp							Fcar Clear	90s
5311	Comp @ H2							"	90s
5312	BIAS(4)								
5313	MWC560			04 42 14	05 02 14	03 09 W			1200s
5314	Comp							Fcar Clear	90s
5315	~~BIAS(4)~~ FLAT at MWC560 posn							TUNG a-1/4	25s
5316	BIAS(4)								
5317	Comp							Fcar Clear	90s
5318	H087901	10 03 03	+12 27	05 20	05 21	00 46 W			
CC05319	Focus Test	Comp / Stellar posns						Fcar Clear	40
CC05320								"	40

Spectr. Temp. ..... Dome Temp./Hum. -15.5°C 56% Transparency Conditions ..... Hazy 173

Focus ... 7.20 .....

Spectr. Temp. ..... Dome Temp./Hum. -16°C 57%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 4760 1800	200μ Full	4845	15c;		12,400 m 1X	
460	4"-8"							18c;			
								~~19c~~		13k max fixed	
								~~19c~~			
					G-6000 1800/56.1°		Hα	~~19c~~	blue of Hα	actually	
										Dome T = -16.1°C	
	3"-6"							19c;			
								~~20c~~;			
								~~20c~~			
								~~20c~~			
39008		1.36	B7V					20c;	Telluric Std	guided 7 ft on 4X	
(4000	0	10	1074	401]	G-6000 1800/56.1°		Hα	1		T = -16.0°C	
							"	2		Set 7.20	
(All to		K sys and U3.5R)						stellar fwd by		1.5 pixels	

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Pg#1 Thurs Fri

Date ..19910919.20... Observers ..MKi..Tn.....

Emulsion Batches:

Data aquisition PC: set to WWV time / mk III

Note Logbook times taken from MST as WWV Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD5321.fts	Bias (x4)			19:51					
5322	Comp							20Sec	Folk Clear
5323	CV Cyg			20 00 00	20 20 00				1200
5324	"			20 20 30	20 40 00 (11 40 sec)				
5325	"			20 42 40	21 02 40				
5326	Comp FeNe								20
5327	flat							A=½	20
5328	bias (x4)								
5329	FLAT							A ½	20s
5330	Comp							Folk Clear	20
5331	HD220657	23 20 23	+22 51 00	21 33 48	21 39 15	3 50W			
5332	"	"	"	21 41 10	21 46 15				
5333	Comp at HD222368 posn								
5334	HD222368	23 34 48	+05 05	22 01	22 05 20	4 01 W			
5335	"	"	"	22 07	22 09				

Spectr. Temp. ..... Dome Temp./Hum. -7.6°C 74% Transparency Conditions ... Hazey .....

Focus ... 7.05 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90CGain CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G2596 600/	700u Full	4120A		FORMAT	1024 8 1	CCDFmt
315	2-4"	11						-	Hdy pgm	Tel on East side Field drawn	
335								3c:			
380								4c:		High background	
								5c:			
11 000		V 4.5	F8 IV					6c:	Std Star	MAX = 8k/pixel	
11,700								7c:	"		
11000	3-5"	V 4.13	F7V					8	Comparison Star, formerly a Std Star		
17000								4&9			

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pg # 2

Date 1.9.91 Dec 1.9120... Observers ..Mki.-.T.y.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05336	HD222368			22 11	2223	4 19 W			
5337	Comp							FeNe Clear	20
5338	FLAT							TUNG A=1/2	20
5339 5340	BIAS(4) Comp for V471 Tau							FeNe Clear	20
5341	V471 Tau	034443	+16 5706	22 3450	22 5450	00 41 W			1200s
5342	"	"	"	225600	23 1600	01 02 W			1200
5343	Comp							FeNe Clear	20s
5344	FLAT							TUNG A=1/2	20s
5345	Bias (4)								
OK 5346	Comp							FeNe Clear	20s
5347	KIWC560	072101	-07321223	2327	23 5727	E			1200
5348	Comp							FeNe Clear	20
5349	BIAS								
5350	FLAT							TUNG A=1/2	20
~~5351~~	~~FLAT~~	~~[illegible]~~	Kept actually					TUNG A=1/2	~~20s~~
	FLAT								

Spectr. Temp. ..... Dome Temp./Hum. -9.2°C 78% Transparency Conditions .. Hazy .....

Focus ..... 7.05 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
21000	5"			CASS CCD	G 2596 600/	200u Full Length	4120Å	10c:	std star	BK MAX	
		V 9.4-9.71									
1200	2-3"	~~3~~	KOV					11	mk. pgm	Moon To East (fairly close)	
1030								12			
								~~13~~		11 h max 40u -5° -3 a.m.	
590								13c:			
					G 2596 600		4120Å	14:			
[470	0	30	1324	81]	1800/		HF	15		G= 4760	

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Emulsion Batches: .....

Date 1991 Dec 19/20 Observers MK TA 5 30 50

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~CC05352~~	Comp							FeAr Clear	20s
CC05353	MWC 560	07 21 01	-07 32 12	01 46 10	02 16 10	00 27 W			1800
5354	"	"	"	02 17 40	02 47 40				1800
5355	Comp							FeAr Clear	20
5356	FLAT							TUNG A-1/2	~~24~~
5357	BIAS(1)								
5358	Comp @ Hα			03 21	03 52 00			FeAr Clear	70s
5359	MWC 560			~~02 51 20~~	03 17 45	02 03 W			1713s
5360	Comp							FeAr Clear	70s
5361	FLAT							TUNG A-1/4	13
5362	BIAS(4)								
5363	Comp for Regulus							FeAr Clear	70s
5364	HD 87901	10 03 03	+10 27	04 15	04 15 30	00 15 E			
5365	"	"	"	04 19	04 19 40				
5366	Comp							FeAr Clear	70s

Spectr. Temp. ..... Dome Temp./Hum. 9.5°C 76% Transparency Conditions Hazy cloudy 178

Focus 7.05

Spectr. Temp. ..... Dome Temp./Hum. 9.8°C 77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G-4760 (800)	200μ Full	Hβ	16c		470 0 30 1024 8 1 CCD FMT	
600	3"-2"							17c	NIKi pgm		
660								18c		part cloudy	
26 secs.								19c		13K max	
					G 6000 (800)		Hα	19c		All failed same Time CCD, mkIII, TV guiding, Heater coil stopped over after reset	
600 ~~300~~								3c	1st after Reboot		
								4c			
								5c		11K MAX	
30 000								6c	Telluric Std	10K max	
20 000								7c		9K max	
								8c			

pg # 4

Date ...1991..Dec. 19/20 Observers ..T...MKS.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC05367	FLAT							TUNG A=1/4	13s
5368	BIAS(4)								
		1991	Dec 21/22	Tests	Tri-X/mak (mentor stepped off)				
CC05369	Focus Test	Comp posn.						FeAr Clear	
5370	" "	Stellar posn.						"	"

Spectr. Temp. ..... Dome Temp./Hum. -9.3°C 80% Transparency Conditions ... Cloudy ...

Focus ... 7.05 ...

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/		Hα	9Ci		MAX 12K	
				All to work @ Forseus.							
-00.1°C	Set	6.90			G6000 1800	200µ Full	Hα	1Ci	360 0	10 1024 40 1 CCDF	
								2Ci	stellar	sh: H blue < 1µm	

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pg#1 Sun-Mon

Date 1991 Dec 22/23 Observers Hdg./J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCO5371	Comp							FeNe Clear	40s
5372	BIAS(4)			~18 15 START					
5373	CV Cyg	19 50 45	+37 47 1 (1900)	18 ~~25~~ 30	18 30 50			~900 sec	
5374	"			18 33 10	18 55 10			1500	25m
5375	Comp							FeNe Clear	40s
5376	FLAT (4 HOA						Clear	Turq.	90
5377	FLAT)						"	Turq.	78
5378	BIAS (4)			19 06 45					
5379	Comp for Hor			~~for~~				FeAr Clear	90s
5380	CV Cyg	19 50 45	+37 47 1	19 18 28	19 39 28			1200	
5381	"			19 40 10	20 00 10			1200	
5382	"			20 00 45	20 30 45				
5383	Comp							FeAr Clear	90s
5384	BIAS (4)								
5385	FLAT							Turq	
5386/87	Focus Test	Comp / Stellar pairs				0 0	+8°	Fe/Ar Comp	40/4

Spectr. Temp. ..... Dome Temp./Hum. 0°C 75% Transparency Conditions .. Hazy .....

Focus ..... 7.05 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

90 CCD Min T = -100°C

Format 500 0 40 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 2546 600/	200u Full length	4110Å	3ci			
130	3"-4"	"						4ci	Holy pgm		
260								5ci	"		
								6ci		10K max	
								7ci		15K max	
					G=6020 1800/		Hα	8ci		Format 480 0 45 1024 4 1	
160	4"							9ci	Holy pgm		
422								10ci			
438								11ci			
										CCDT = -100°C	
					G=6020 1800					18K max	
	T =	-1°C	-	Set	6.80		Hα	14/15	Servovisi Right on	Rel of Tel and at blue end	

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pg # 1 Mon-Tues

Date 1991 Dec 23/24. Observers Hels./.Tn...[r.G.]...

(using MMT or www Time)

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
cc05388	Comp							FeAr Clear	90s	
5389	HD204848	21 26.2	−10 11	17 29 00	17 39 00	01 59W	x		60s 10 min	40
5390	HD204848 Con	"	"	17 39 19	18 04 19	02 29W	x		1800s	30
5391	Comp							FeAr Clear	90s	
5392	BIAS(4)									
5393	FLAT	same posn.						TUNG A=1/4	24s	
5394	Comp for	HD 221170						FeAr Clear	90s	
5395	HD221170	23 24.6	+29 53	18 20 24	18 35 24	00 56W				30
5396	Comp							FeAr Clear	90s	
5397	BIAS(4)									
5398	FLAT at	posn of HD221170						TUNG A=1/4	28s	
5399	FLAT at	posn of	HR 2149 23			01 57W	+10 51	TUNG A=1/4	28s	
5400	Comp	" "	"							
5401	HD214923	22 36.5	+10 19	18 52 35	18 55	2 05 W	x	"	28s	30
5402	"	"	"	18 53 00	19 03 00	2-12 W	✓			30

Spectr. Temp. * ..... Dome Temp./Hum. -0.0° ... 71% Transparency Conditions .. Hazy ... Clearing .....

Focus .. 6.80 .. changed from 7.05 @ 20:45 previous night

Spectr. Temp. ..... Dome Temp./Hum. .....

FORMAT

90CGAin T → -100° 450 0 50 029 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6020 1800/	200μ Full	H+	3ci		*Focus change maybe some twilight	
1640	3"-5"	V 7.41	Fe-4 CH+1	"	2300 ADU sum AVE over 5 cols above back gnd.			4ci	+G pgm	extreme W/L STOR) cloud CCDT = -100°C	
3100	4"-7"							5ci	"	Some cloud	
								6ci			
								1ci		Dome T = -00.4°C	
								7ci		13k max ADU	
2000	3"-4"	V 7.66	KO II Fe-3					8ci	+G std	< 2350 ADU sum AVG over Some Cloud	
								9ci			
										Dome T = -0.7	
										13k max ADU/pix	
										13k " "	
								10ci			
18,300		V 3.40	B&V					11ci	Telluric std	v. hot some cloud 3k max	
33,140		"	"					12ci	"	65k MAX	

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pg 2

Date 1991 Dec 23/24 Observers T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
CCD5403 ✓	Comp							Feat Clear	40s	
5404	BIAS(4)									
5405 ✓	Comp at BM Cass posn							Feat Clear	90s	
5406 ✓	BM Cass	00 48 6	+63 33	19 26 00	19 46 00	00 42 W	✓		1200s	0.10
5907 ✓	"	"	"	19 47 00	20 08 00	01 05 W	✗		1260s	0.80
5408 ✓	Comp							Feat Clear	90s	
5409 ✓										
5410 ✓	FLATS							Turq Filter	38s	
5411 ✓	Comp at H posn							Feat Clear	40s	
5912 ✓	BM Cass	00 48 6	+63 33	20 18 00	20 30 00	01 27 W	✓			1.67
5413 ✓	Comp							Feat Clear	40s	
5414 ✓	BIAS(4)									
5415 ✓										
→ 5417 ✓	FLATS @ H posn for BM Cass							Turq Clear	28s	
5418 ✓	Comp							Feat Clear	40s	
5419	HD 36485C	05 26 59	−00 22	20 53 10	20 59 10	2 41 E	✓			0.77
5420	Comp							Feat Clear	40s	

Spectr. Temp. ..... Dome Temp./Hum. −10°C ... 64% Transparency Conditions ... Part. Cloudy .....

Focus ..... 6.80 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G-6020 1800/	200μ Full	Hα				
									$\bar{x}$ = 126.375 σ 1.000		
610	3"-4"	8.80 V – 9.33						13i	Mt. pgm	2700 HD max Hα / pixel Fair-Poor Cloudy	
980								14c;	"		
								15c;			
								~~16c;~~		13 K max AO4	
					G 4760 1800/		* Hβ	16c;		*centered at 4845Å	
484								17c;	11th pgm		
								19c; + 20i;		13K max AO4	
1277	3"-4"	6.87 V	P&V					18c;	Bn pgm	5 OBJ C	

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pg #3

Date 1991 Dec 23/24 Observers T.A. for "Ely"

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
CCO5421	Comp @ Hz							Fe Ar Clear	90s	
CCO5422	HD 36485C	05 26 54	-00 22 00	21 04 20	21 34 20	2 06 E	✓		1800	1750
5423	Comp							Fe Ar Clear	90s	
5424 5425	FLATS x2							TUNG A=1/4	78s	
5426	Comp at 50° Roof Former							Fe Ar Clear	90s	
5427	HD 36485C	05 26 54	-00 22 00	21 50 10	22 30 10	1 09 E	✓		2400 sec	2370
5428	BIAS(4)									
5429	Comp							Fe Ar Clear	90s	
5430 5432	FLATS x3							TUNG A-1/4	78s	
5433	HD 36485C	05 26 54	-00 22	22 38 50	23 18 50	00 20 E	✓		2400s	2360
5434	Comp							Fe Ar Clear	90s	
5435	BIAS(4)									
5436	Comp							Fe Ar Clear	90s	
5437	HD 37479	05 33 44	-02 35	23 36 50	23 56 50	00 10 W	✓		1800	
5438	Comp							Fe Ar Clear	90s	

Spectr. Temp. ..... Dome Temp./Hum. 2.2°C ..... 61% Transparency Conditions .. FAIRLY Cloudy .....

Focus ..... 680 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Variable seeing

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CAS CCD	G 6020 1800	200μ Full	Hα			above background SK non-suitable over 10 cols some cloud	
6550	3"-8"	6·87 ✓	B3V					21c:	Blu pgm	5 or c	
								22c:			
					G020 1800			23 ~~23~~			
					6050 1800		Red of Hα *	24c:		* CONTRAL ∂ 6600 Å	
10,070	3"-8"	6·87 ✓	B3V					25c:	Blu pgm.	To include 6678 Å He ~ 8k 60 15μ 1.2 mm 800 strips	3SY poor
								1c:		Dome T = -36°C	
								26c:			
								27 ~~27~~			
7660	3"-8"							29c:	Blu pgm		
								1k:			
								1c:			
								15c:		5k non-suitable over 10 cols some cloud	
3316	4"-8"	6·53 ✓	B3					17c:	Blu pgm	5 or c E ADC 10	
										slight sky cont. on plate # 720	
				No doubt from nebulosity →						centre of Hα absorption	

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pg #4

Emulsion Batches: .....

Date .1991..Dec.23/24.... Observers ..TH.....Lee...Glo..... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05439 ✓	Comp							FeAr Clear	90s
5440 ✓	HD36485C	05 26 54	-00 22	00 04 10	00 44 10	01 04 W	✓		240 sec
5441 ✓	Comp							FeAr Clear	90s
5442 ✓	BIAS (4)								
5443 ✓	DARK	w/ lens cap			01 10				1200
5444 ✓	Comp							FeAr Clear	90s
ONL 5445 ✓	HD36485C	05 26 54	-00 22	01 16 00	01 46 00	02 06 W	✓		1800
5446 ✓	Comp							FeAr Clear	90s
5447 18	FLATS x 3	NOTE: 5449 is A COMPARISON SPECTRA						Tungsten ~1/4	3s
~~5448~~									
5450	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -5.7°C 57.6% Transparency Conditions ... Fine .....

Focus .... 6.80 .....

Spectr. Temp. ..... Dome Temp./Hum. -7.3°C 55% MERRY X-MASS All, OR most of it!

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6050	200μ Full	Hα	18c;			
8890	6-7"	V 6.87	B&K				OR 6600Å Central	~~19c~~	Blue pgm		
								20c;			
										CCD T = -100.4°C	
								~~20c~~			
	3-8"	V 6.87	B&K					20c	Blue pgm		
								~~21c~~			
								22c; 23c; 24c;			
				All backed up to persons and warm,							

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pg #1 Thurs - Fri

Date 17.91..Dec.26/27. Observers ..Jim.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE04124 fts	BIAS(4)			21 34		05 50 E	+00 05 39		
4125. fts	Flexure tests	4125–	4135 after	Both Cameras,		05 50 E	+00 05 39	THA	10sec
4126. fts	OR	Collimator	clamps tightened to what			05 00 E			
4127. fts		Jim T calls tight. (probably too tight)				04 00 E			
4128						03 00 E			
4129						02 00 E			
4130						01 00 E			
4131						00 00			
4132						01 00 W			
4133						02 00 W			
4134						03 00 W			
4135						04 00 W			
4136	(Still at 4 hrs west)	Collimator	Clamps loosened off and			04 00 W	but after retightening		
4137	retightened to	"wimp" tight, ie medium				05 50 E	to 4 & 8 tight on clamps		
4138				tight pass.		05 00 E			

Spectr. Temp. ..... Dome Temp./Hum. −01.0°C 83% Transparency Conditions .. Cloudy .....

Focus ....: 200 .....

CCDT → −100°C

Spectr. Temp. ..... Dome Temp./Hum. .....

148.566 of 1.740 Stats of Bias 90 CCDs in 4-1 bin

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
format fix	Tests	32	0	echelle CCD 64 024	600 l/mm 8 1		131.190	−20	echelle grating 70 18.90	4483 central 5th complete	
					.4530 x tilt					ORDER from Top #127	
										4469Å well in on Right Fiducial criteria	
								3c:			
								4c:		4378Å central 2nd complete	
								4c:		ORDer from Top #130 order 4387 ~~to left~~ pixel #260	
								5c:		4347 center on Top	
								6c:	L 2.5 pixels rel to 5E	complete ORder #131	
								7c:		Hγ 4340 ~~pixel #350~~ just finished exp.	
								7	Big dome turn west before exp		
								8c:	Typical gradual 5-10 w wheel set Hγ		
								9c:	of Ar Lamp Exps. = 30 secs to HOT.		
								10c:	Shift Left 5 pixels rel to 5E		
								11c:	Now 4483 is 4th complete order		
			Shift	<1 pixel Right rel to 4hrs			west	12	from	top	
								13	no shift rel to	0550E	

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Date 1991 Dec 26.27 Observers T.H.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04139	Focus test cont					04 00E		ThA	10sec
4140						0300E			
4141						0200E			
4142						0100E			
4143						Meridian			
4144						0100W			
4145						0200W			
4146						0300W			
4147						0400W			
ce04148	Focus - inboard					0400W	0°	ThA	10s
4149	" outboard					"	"	"	10s
4150	Focus - inboard					"	"	"	"
4151	" outboard					"	"	"	"

Spectr. Temp. ..... Dome Temp./Hum. -00.8°C 83% Transparency Conditions ..Cloudy..... 19

Focus 200

Echelle Tilt = 18.90

Spectr. Temp. ..... Dome Temp./Hum. ..... Cross Grating Tilt = .4530 change to .4540 a Ha brightening

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	.4530 600 l/mm			14ci	Flame Tests	n shift	
								15ci		s' shift Left ~.3 pixel	
								16ci		v s' shift further Left	
								17ci		another s' shift Left	
								18ci		v s' further shift Left	
	Beginning to see this				esp			19ci		s' " " "	
								20ci		longer shift Left	
								21ci		no shift from previous	
		Total disp Left rel to CS 50E ≈ 1 pixel						22ci		very s' shift Left of previous	
Set	0.200	T = -00.8°C			.4540 600 l/mm			24ci			
								25ci		Confirmed shift v s' Left ~ 1 pixel	
Set	0.195	T = -00.8°C						26			
Should be right for -10°C								27		outburst shift Left again	
					All TO responses work'g						

195 pg#1 Fri - Sat

Date 1991 Dec 27/28 Observers K.K. / J.T. / K.B. Ramiran mentorship student

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE04152	BII HARTMAN	inboard	Focus Plate			04 W	0°	TiAr	10s
4153	HARTMAN	outboard						TiAr	10s
4154	BIHS(4)		stats	150.739	0.697				
4155	Comp								20s
4156	HD 37Ī2	00 34 08	+55 59 00	17 52 10	18 24 10	00 10E CE04157 Comp		TiA	5s 30s
4159	HD 34029	05 09 18	+45 54	18 42 00	18 52 00	CE04158 CE04160	04 18E	"	5s
4160	"	"	"	18 58 45 1300	19 18 45	CE04161	"	"	5s
4162	Comp after moving auxiliary source across Tube (Ethanol, Argon, Effects)							TiAr	5s
4163	HD 34029	05 09 18	+45 54	19 38 15	19 45 15	3 25E			
4164	Comp							TiA	5s
4165	BIHS				340s				
4166	HD 34029	05 09 18	+45 54	19 51 30	19 58 00	3 12E	X		
4167	Comp							TiAr	5s
4168	Comp				600s			"	5s
4169	HD 3712	00 34 08	+55 59	20 08 50	20 18 50	1 45W	X		10min
4170	Comp							TiAr	5s

Spectr. Temp. ..... Dome Temp./Hum. 7.00°C : 72% Transparency Conditions . Fine .....

Focus . . . 0.200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 3 Exposures

Echelle Tilt = 18.90

90CGHII: CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Set	.300	T=+7.00°C		Echelle-CCD	.15.40 600/mm	.277 width = 60μ .205 Height = 60μ				0 0 64 4981	
							4971-4981	(Eds criteria)			
								Ic	Non-Standard	0 0 256 1024 1 1	
							4861 8.4662				
									Some comp lines saturated		
110 counts due to PARTIAL image Blockage	3"	2.23	KO IIIa		-17.6369				Std/Ref	DARK 0 15E 0 20E 1 Bias 0 339	
		0.08	G6 IV + G2 III		-6.5641		4962	5c	K+ pgm		
					-6.6109		.5342	6c	"	Exp meter 200 cnts/sec with H7 H4 only	
									Some weeds to be moved out of the way now.		
11,500		0.08	G6 IV + G2 III					7c		13,400 MAX/pixel	
					-6.6237						
12,500							.5432				
3570	3"	2.23	KO IIIa		-17.7530		.5536	4c	Std/Ref	3000 ADU/pixel	

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Date 1991 Dec 27/28 Observers KK / TH / KB

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo+171	✓ BIAS(4)								
4172	✓ FLAT	[needs more than on	Dec 1 obs]			02 E	+22°	THAR	60sec
4173	✓ FLAT 6.30s	Average of 6	30 sec	Flats		~01 50E	+22°		30sec
4174	✓ BIAS(4)								
4175	✓ Comp							Th Ar	5s
4176	✓ HD 47105	06 31.9	+16 29	20 57 10	21 27 10				30min
4177	✓ Comp							Th Ar	5sec
4178	✓ HD 47105			21 31 45	22 01 45	2 29E			30min
4179	✓ Comp							Th A	5
4180	Comp								
4181	✓ HD 209790	22 00.9	+64 08	22 16 10	22 56 10	7 00W			
4182	✓ comp							Th A	5s
4183	✓ "							"	"
4184	✓ HD 8890	01 22.6	+88 46	23 08 20	23 28 20	3 23W			2400secs
4185	✓ Comp							Th A	5s

Spectr. Temp. ..... Dome Temp./Hum. 1.4°C ... 75% Transparency Conditions ..S.l.Hz.cy.....

Focus ....200.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	.4540 600						
						60u wid/Ht = .277 on micr 800u Height = .185 on micr				MAX 11K ADU/pixel	
						7				MAX 6K ADU/pixel	
						60u wid/Ht 600u Height		~~3~~			
6300		B 1.09	AOIV		1.8595		.5975	~~2~~ 3	KK pgm	MAX 11K ADU/pixel	
7300					1.8128		.6215	~~3~~ 4			
1020		B 4.63	A3m		-11.9617		.6509			max 1040 ADU at reddest λ's	
~~2300~~		B 1.9	F2		-1.6159		.6818	1 C1		MAX HOU = 4300 ADU/pixel	

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pg #3

Emulsion Batches: .....

Date 1991 Dec 27/28 Observers KK/TM/ Data PC Time & Header Times... and Astro clock ± 5 secs ahead of WWV

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04186	BIAS(4)	at Polaris pos'n							
4187	HD8890			233620	235520			19mi	11s
4188	Comp							THA	5s
4189	Comp							"	5s
4190	HD61421	07 34 04	+05 39 00	000620	001420 (480s)	01 18E	x		8min
4191	Comp							THA	5s
4192	Comp							"	"
4193	HD62509	07 39 2	+28 16	002300	003100	01 07E			
4194	Comp							THA	5s
4195	BIAS(4)								
4196 4197	FLATS x3					01 08W	+28°06	JUNG	10s
4199 4201	FLATS x3					"	"	JUNG	10s

Spectr. Temp. ..... Dome Temp./Hum. -31°C 80% Transparency Conditions ..... SI hazy 200

Focus ... 200 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				E chelle CCD	600 l/mm	60u 600L	$\bar{X}$=149.332		σ 0.810		
5200		1.4	F2		-1.6203 (~~-1.6204~~) -1.62		.7009	5C1			
7700		0.34	F5III		9.9087		.7208	1C1	STd star	5300 MAX	
								~~3C1~~			
5700		1.4	K0III		8.9231		.7326	3C1	FV Std		
								~~1C1~~			
								1C1		Comp T= -30°C	
Note earlier Flats were asymetrically illuminated - KK fixed problem										MAX 11K/pixel	
13 secs/copies to Perseus/file					All to Perseus and WORM.						
				Start 0:17	50 files To WORM			Keep No copy at DV			
				End 01 54	7 mins $\frac{4.30}{50}$			8 secs/file			

201

Emulsion Batches:

Date 1991 Dec 28/29 Observers Ty Tests

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Just	Optimizing	Setup	to Red	Region.	checking	differences		TUNG	20
		between	blaze	side preference	for same λ			ThA ~~ThA~~	20
		Echelle	19.20	tilt ∝ 66	% higher signal than		16.40°	ThA	20
								TUNG	20
								ThA	10+ 50 ... 20
								Tung	... 2
CEO 4202	On Inboard	HeR Tran Test		23 50		0 4W	+10°	Th Ar	5 sec
4203	outboard	"	"					Th Ar	25 sec

Spectr. Temp

Focus

Spectr. Temp

Exp. Mtr.

=1/2 sec

Spectr. Temp. ..... Dome Temp./Hum. +1°C 80% Transparency Conditions Cloudy 202

Focus ...0.200.....

Spectr. Temp. ..... Dome Temp./Hum. ..... control 0 0 85 1024 12 : 00 PM

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	×Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD Echelle 17.00	.2850 600	60u 800μ	6535Å	8ci			
				Echelle 17.00	"	"	"	7ci			
				19.00			~~6667Å~~	9ci		6565Å control	
							~~6667Å~~	10ci		10 k MAX blaze sl Left of center	
							6645 6721	11ci			
200 secs				19.20	.2810 600		6562 center	7ci	Bo Horn order 6693 → 6714 6711 str < 20 counts		
0.2 secs								8ci		10k MAX Near center 9600	
				16.40	.2813 600 in/mm			10ci	6711 str = 320 ADU	6707 center keep to 7k	
								11ci		MAX 7200 ADU saturation order	
T = -00.3°C - Set +200				19.20	.2810 600 in/mm		6567Å	7ci		6707 Å center	
								8ci		Bo Horn order	
									Outbound center slit 0.3		

203

Mon - Tues

Date 1991 Dec 30/31 Observers T. v. for [KK] (K.B.) Note Times in Book are for MKT ∴ UWT

Emulsion Batches: ..... * 100 TSCALE ..... Time,

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04204	BIAS(4)			17 37		Date PC a 3 secs	Time ahead		
4205 4207	FLATS x 3					of UWU	Time,	TURG	.6 sec
4208	Comp							TiAr	5.0 sec
4209	HD 209790	22 00.9	+64 08	17 54 40	18 34 40	2 49 W		2400 sec	
4210	Comp							TiAr	5.0 sec
4211	Comp							TiAr	5.0 sec
4210	HD 3713	00 34.8	+55 59	18 45 48	18 53 48	0 31 W	ce04213	TiAr	5.0 sec
4214	BIAS(4)								
4215	Comp for Capella							TiAr	10 sec
4216	BIAS(4)	at 0 again							
4217	HD 34029	05 09.8	+45 54	19 12 10	19 19 10	03 34 E	ce04219	TiA	10 sec
4218	"	"	"	19 23 30	19 29 30	03 18 E			
4220 4222	FLATS x 3					Meridian	+20°		20 sec
4224	HD 47105	06 31.9	+16 29	19 52 30	20 02 30	3 55 E	ce04223 ce04225	TiA	10 sec
4226	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. ~2.6°C ..... 60% Transparency Conditions ..... Fine .....

Focus ... 200 .....

Spectr. Temp. ..... Dome Temp./Hum. ~4.7°C ..... 54% control

0 0 256 1024 4 1 CCDFAST

CCDT - 100°C 90 Cycle at First

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Tilt echelle CCD 19.40	.2830 600 l/mm		Ha	1Ci	6707Å confirm vs Hom ORDER	$\bar{x}$ 146.957 σ 1.150	
						60u width .277 500u length .155				≈ 10K max/pixel	
						60u 500u length = .205		~~3.2Ci~~	~~Asm Sp - KK~~	~~Scale 2.0 2.0 3 2.7 W~~	
1735	3"	B 4.63	A3m					3Ci	Asm Sp - KK	4000 ADU MAX/pixel Solar comp To Test scan in TV 3 min to view	TV
2500		V 4.73	Hoiia					5Ci	Stdvel	9K MAX/pixel	
										Scan To -4.2°C	
— Procedure	1 sec due to scale setting.									Gain changed to 0 Cycle	
14,000		V 0.08	G021 +G III					5Ci	Asm Sp - KK	13K MAX/pixel	
12,500								6Ci			
Missing 25	0.85	B 1.00	Stacks			60u 800 Height				11K MAX/pixel	
8,900	3"	B 1.9	10 IV			60u 600u Height		~~3Ci~~	~~Asm Sp - KK~~	5K ADU MAX/pixel	
										Scan To -4.7°C	

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pg #2

Date 1991 Dec 30/31 Observers [K.] ... T.H./K.Gilmore

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
C03 4227	HD 47105	06 31 9	+16 29	20 28 10	20 58 10	3 21 E	C004225	TMa	10 sec
C004230	HD62509	07 39 2	+28 16	21 06 00	21 16 00	"	C004229 C004231	"	"
C004233	HD95689	10 57 6	+62 17	21 27 20	21 47 20	"	C004232 C004234	"	"
OMG 4235	BIAS (4)	Twilight	sky						
4236	DARK 15 min	of HD95689		21 57	30 min				
4236	HD87901	10 03 03	+12 27	22 22 40	22 52 40	4 56 E	C004237 C004239	TMa	10 sec
4240 4241	FLATS x 3					0 10 W	+16 18		
4242	BIAS (4)	still	0 Cotton				"		
4243 4244	F475 x 3	(Blue)	90 Cotton		"	00 40 W	"		
4247	BIAS (4)								
CM 4247	HD 47105	06 31 9	+16 29	23 34 24	23 55 24	x	C004248 C004250	TMa	5 sec
4251	"	"	"	00 02 30	00 32 30	00 47 W	C004252	"	"
4254	HD 34029	05 09 18	+16 54	00 45 10	00 52 10	W	C004253 C004255	"	"
4257	HD 5421	07 34 04	+05 29	01 03 50	01 13 50		C004256 C004258		
4259	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -4.8°C 54% Transparency Conditions ... Fine & Cl Hazy .....

Focus ... 1.200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... OCGAM Still CCDT = -101.5°

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
11 000	2-3"	B 1.09	AO IV	Echelle CCD	~~4.40~~ 600 l/mm	60µ 60cm height	Hα	4Ci	Asm Sp-KK	50 Å summed over 670 Å over 10 cols - 300 K photons	
3525		V 1.14	KO Ib		.2830 x tilt			(5Ci ~~Comp~~)		10K max ADU/pixel	
13.40	4-5"	V 1.79	KO III					5Ci	Asm Sp. KK	Contrast V comp 10K max ADU/Pixel	
6200	8"	V 1.36	B7 V				Hα	~~Pec~~	Tectarus Std	400 Å col summed at 670 Å	
							Hα			MAX 11K ADU/Pixel	
				1890	~~1.5490~~ 600 l/mm x tilt = .1540	80µ straight	Fcls Region 4471-4489		GOCGAM	13K max ADU/Pixel	
7400	2-3"	B 1.09	AO IV			60µ width 600µ height		Bci	Asm Sp KK	8K pMAX ADU/Pixel	
13000								7ci	"	430 K sum ADU at 7 cols = 120 K photons.	
18.50		V 0.08	G6 III + G-2 III					3Ci	"	6K max ADU/Pixel	
11 000		0.34	F5 II					1ci	(Std Ref Asm)	10K max ADU/Pixel	

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pg #3

Date 1931 Dec 30/31 Observers [illegible] Ter / Kenton

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
C.O. 4260	Jupiter center (3 minutes East)			01 25 20	01 37 20	03 05 E			
4261	Comp							Th Ar	5 sec
4262	FLAT					0 10 1 W	-4 4 5		
4263	FLAT					0 10 1 W	-4 4 5		
4264	FLAT					0 10 1 W	-4 4 5		
4265	B145(4)								

Spectr. Tem

Focus ....

Spectr. Tem

Exp Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Fair

Focus ..... 4200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... -6°C 57%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4000			G	Echelle CCD	17540 608	60μ 500 Hight			Stellar spectra (Judd Bowman)		
							4471-4819				
										MAX 12 H. ADU/pixel	
										"	
					H1 to	μ ohm	& Persons				

209 pg #1 Fri Sat

Date 1992 JAN 10/11... Observers ..B.L.../.T.Y.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05452	HS HD6456	01 00 19.1 20	+20 56 16	1817	x 18 50	00 46W	CC05451 x CC05453	FeAr	90sec
CC05454	BIAS(4)								
CC05455	HD 6457	01 00 19	+20 55 48	1909	19 49	01 45W			
CC05456	Comp							FeAr	90sec
CC05457	~~COMP HD 14055~~	~~02 11 22~~	~~+33 23 05~~					FeAr	90sec
CC05458	HD14055	02 11 22	+33 23 05	20 01	20 07	0051W	~~CC054~~		
CC05459	Comp							FeAr	90s
CC05460	Comp							FeAr	90s
CC05461	HD 18411	02 52 22	+39 15 45	2020	20 27	0030W			
5462	Comp							FeAr	90s
5463	Comp							n	4
5464	HD 19832	03 06 17	+26 52 48	20 36	21 06	0056W			
5465	Comp							FeAr	90s
5466	BIAS(4)								
5467-5475	FLATS x(9)							TUNG A=1/2	7sec

Spectr. Temp. ..... Dome Temp./Hum. 62% -22 Transparency Conditions . PAR T...Cloudy.....

Focus ....6:80.....

Spectr. Temp. ..... Dome Temp./Hum. 62% -30

CCD T -> -100°C

CGAin = 90 FORMAT 480 050 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10000	3"-5"	B 5.31	A1V$_m$	CASS CCD	*G 6050 1800/	200u Full Length	Hd		telluric Std	* G=6050 NW of pair Cloudy at end	
								1ci			
10000		5.49	A0V$_m$	CASS CCD				4ci	TELL. STD.		
								5ci			
								~~6ci~~			
26000		B 4.03	A1V$_{nn}$					6ci	Tell std		
		~~B 4.76~~	~~A2V$_m$~~					~~7ci~~	~~Telluric Std.~~		
11,400		B 4.76	A2V$_m$					7ci	Telluric Std		
14000		5.70	B8(Si)					8ci	~~Telluric Std~~	Thin cloudy	
							All to	Feb	Seis and	warm.	

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SAT / SUN

Date 1992 JAN 18/19 Observers [Bh] Tu

Emulsion Batches:

* Times from MHO ∴ WWV Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCO5476	Comp			≈18 14				FeAr CLEAR	90s
5477	BIAS (4)			≈18 17					
5478	HD21686	03 24 36	+10 59 37	* 18 19 20	18 39 20	01 18 E			1200sec
5479	Comp							FeAr CLEAR	90sec
5480	Comp							"	90 sec
5481	HD36485	05 26 54	−00 21 30	18 51 20	19 11 20	02 47 E			
5482	Comp							FeAr CLEAR	90sec
5483	BIAS (4)								
5484 5492	FLATS (9)			≈20 EST		0 0	−16°	TUNG A=1/2	7 SEC
5493	BIAS (4)			20 05					
			JAN 19 @ next night			Tu			
CCO5494	Spectrum focus test		(comp	posn)	19 20 EST	Meridian	+20°	FeAr CLEAR	40
5495	"	" "	Stellar	posn.		0 0	"	"	40

Spectr. Temp. ..... Dome Temp./Hum. −11°C 54% Transparency Conditions ... thin cloud .....

Focus 6.8 ... stellar Red < 0.3 pixels 3/11/12 T = −21.5°C

CCD T → −100°C

Spectr. Temp. Set 7.00 for 14th 15/19 Dome Temp./Hum. ..... X RANGE 90 GAIN/FORMAT 480 0 50 K 24 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6050 1800/56.3°	200μ Full Length	6500Å = 6700Å				
										Dome T = −13°C	
1630	8"	B 5.11	A0 V m					3ci	Telluric Std [Bln]	thin cloud v sini = 236 km s⁻¹	3300 AUV max
1700	6"	B 6.69	B2 V sm	(He Str)				4ci	Bln pgm ⇐	(N 53° from primary) cloudy 8 ori C	
								5ci		± 250 AU sep. AVG of 5 cols above diagnd	
										Dome T = −13.7°C	
								5–13ci		13K max AUV/pixel	
				CASS CCD	G=6050 1800/56.3°	200μ Full	6500 = 6700Å	14ci	560 0 10 ... to 1 ...		
Dome T = −11.0°C			set 7.00		1800/56.3°			15ci		Stellar Red by = .5 pixels	
					All to		in ORion		5 PER SEQ'S		

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FRIDAY

Date JAN 24/1992 Observers B/n/ F.D.

Emulsion Batches:

→ TIME FROM MK III

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO5496	Comp							FeAr Clear	90s
CCO5497	HD 36485	05 26 54	-00 21 30	20 18 05	21 18 00				
5498	Comp							FeAr Clear	90s
5499	BIAS (4)								
5500	Comp							FeArClear	90s
5501	HD 37479	05 33 45	-2 38 48	21 51 20	22 49 25			[illegible]	[illegible]
5502	Comp							FeAr	90s
5503	HD 37479			21 55 00	23 41 00				
5504	Comp							FeAr	90s
5505	HD 37479	05 33 45	-02 38 48	23:53:00	00:53:00				
5506	Comp							FeAr	90s
5507	BIAS (4)								
5508	~~HD 37468~~ COMO	[illegible]	[illegible]					FeAr	90s
5509	HD 37468	05 33 44	-02 39 28	01 15 00	01:24:00				
5510	COMP							FeAr	90s

Spectr. Temp. ..... Dome Temp./Hum. −10.7°C/+52 Transparency Conditions ..... Clear .....

Focus ... 6.9 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

9Q CGAIN TSALE = 1000 CCD Temp = −100.4

FORMAT 480 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCSS CCD	a=6050 1800/563°	200μ		1ci			
9820	5"	B 6.69	B2IVSn (HeS)			200μ		2ci	Bln Prgm (H_α)	Dome H≈55.9% T=−11.3°C	
		NOTE*	[cc05496 − cc05498 to				worm + perseus]	3xi		[cc0549 − cc05498 to w+P]	
								[redacted]			
					a=6050 1800/563°	200μ		3ci			
11,000	"?" (poor)	B 6.32	B2Ipe (HeS)			200μ		4ci	Bln Hα	Hum=53.6% Dome T=−11.8°C	
					a=6050 1800/563	200μ		5ci		Terminated abnormally due to CSS Crash, Exact length of exposure and exposure counts uncertain.	
SEE REMARKS		B 6.32	B2Ipe (HeS)			200μ		6ci	Bln Hα	Hum=59.7% Dome T=−13.0°C	
					a=6050 1800/563°	200μ		7ci		[cc05499 to cc05504 low?]	
UNKNOWN		B 6.32	B2Ipe (HeS)			200μ		8ci	Bln Hα	Hum=63.9% Dome T=−14.6	
					a=6050 1800/563°	200μ		9ci			
								10ci			
		[redacted]	[redacted]			200μ		10ci			
		B 5.57	O9.5V			200μ		11ci	SB − Bln	Hum=63.7% Dome T=−15.7	
								12ci		COMPARISON TOKEN AFTER SPECTRA ON PEDESTAL − COULD [redacted] READ AFTER SHOOT TOKEN BACK UP.	

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Date JAN 24/25 1998 Observers Bln / Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
5511	Comp							FeAr clear	90sec
5512	HD 79158	09 07 16	43 37 48	01:51:20	02:18:00				
5513	Comp							FeAr clear	90s
5514	Comp							FeAr clear	90s
5515	HD 87901	10 03 03	+42 27 22	02:32:30	02:34:00	023 25 W			
5516	Comp							FeAr	90s
5517	BIAS (4)								
5518	FLATS (9)			02:45:00				TUNG A = 1/2	7s
5519	↓							-"-	-"-
5520								-"-	-"-
5521								-"-	-"-
5522								-"-	-"-
5523								-"-	-"-
5524	↓							-"-	-"-
5525								-"-	-"-
5526								-"-	-"-

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... CLEAR .....

Focus .... 6.9 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	a: 6050 1800	200μ		13ci			
20,000		B 5.18	B8 III p Mn					14ci	Bln H_α	Dome T. -12.1°C Hum. 62 1%	
					a= 6050 1800	200μ		15ci			
					a: 6050 1800	200μ		16ci			
30,000		B 1.25	B7 V			200μ		17ci	Telluric Std.	(Bln)	
					G=6050 1800	200μ		18ci			
								19ci			
								20ci			
								21ci			
								22ci			
								23ci			
								24ci			
								25ci			
								26ci		* All to Ref. Work	
								27ci			

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Wed/Thurs

CCD FLEXURE TESTS

Emulsion Batches: .....

Date .. JAN. 29/30/92 Observers ..... F.Bc./J.T.n..... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD5527	focus test	Comp position			21 26				10/18
5528	focus test	Stellar position							
CCD5529	BIAS(4)	using BIAS.BAT		23 45		09 E	+45°		
5530	Flexure Test			23 48		09 E	-	Fe16 C108R	6:2
5531						08 E			
5532						07 E			
5533						06 E			
5534						05 E			
5535						04 E			
5536						03 E			
5537						02 E			
5538						01 E			
5539						00			
5540						01 W			
~~5541~~ 5541						02 W			
5542				0020		03 W			

Spectr. Temp
Focus. 6:2
Spectr. Temp

Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. ...−0.9°C/+79.8% Transparency Conditions ..... Cloudy .....

Focus . 6.85 ... changed tonight from 6.90

Spectr. Temp. ..... Dome Temp./Hum. ..... CCDFIRST 578 0 16 1079 1 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6040 1/300/	200μ PINHOLE	Hd	2ci	Focus test	Set 6.85 Stellar	
					"	"		3ci		/ Vignetted	
								1ci			
				"	"	200μ Pinhole	Hd	3ci	Flexure Test	[Turned Tele gradually while Fix was taken @ 10s]	
								4ci			
								5ci			
								6ci			
								7ci		Some flexure at 6 arcsecs	
								8ci			
								9ci			
								10ci			
								11ci		T: -1.2°C H: 80.6% Dome West before exposure.	
								12ci		Move dome West before exp	
								13ci			
								14ci			
								15ci			

Emulsion Batches: .....

Date ..JAN29/30../92 Observers ....Jn/Fbr..... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCØ 5543						04 W	+45	FeNe	Gse
5544						05 W	"		
5545						05.50 W	+45°		
5546	Flexure @ 0° Dec					05 50E	0° dec		6
5547						05 E			
5548						04 E			
5549						03 E			
5550						02 E			
5551						01 E			
5552						00			
5553						01 00W			
5554						02 W			
5555						03 W			
5556						0345W			

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions CLOUDY .....

Focus .. 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								16ci			
								17ci			
								15ci			
								6ci			
								7ci			
								8ci			
								9ci			
								10ci			
								11ci			
								12ci		(Moved Lyne most before exp	
								13ci			
								14ci		Moved Lyne most BEFORE Also Primary mirror came crashing down	
								15ci			
								16ci			
			Back up (All to iron, cu, and Pepsons)								

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Emulsion Batches: .....

Date 1992 Feb 1/2 Observers Mtk Tu Mak .....

PC Clock set to Mtk Local Time .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05557	BIAS (4)				45 secs				
CC05559	~~40 Aur 357~~ V471 Tau	03 47 26	+17 02	18 32	18 40		CC05558	FeAr Clear	90 sec
CC05561	V471 Tau	03 47 43	+16 57 1	18 57	19 17		CC05560	FeAr Clear	90 sec
CC05562	"			19 19	19 39				
CC05563	"			19 40	20 02				
CC05565	"			20 07	20 27 30		CC05564	FeAr Clear	90 sec
5566	"			20 27 30	20 47 30				
5567	"			20 48	21 08				
5568	Comp						CC05568	FeAr Clear	90 sec
5569	V471 Tau			21 13	21 33				
5570	"			21 34	21 54				
5571	"			21 55	22 15 40				
5573	"			22 20	22 40		CC05572	FeAr Clear	90 sec
5574	"			22 40 30	23 00 30				
5575	"			23 01	23 21				
5576	Comp						CC05576	FeAr Clear	90 sec

Spectr. Temp. ..... Dome Temp./Hum. −8°C 65% Transparency Conditions ..Sl. hazy.....

Focus ....TD..6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

480 0 50 1024-4 1 COFFSET
90 GAIN T => -100C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G. 6000 1800	300u Full Length	Hd				
3200	8"	B 6.3	dfl					4ci	Tidal Wind lattice	[illegible]	
340	6"	~0.8	KOL twd					6ci			
360								7ci		ON SExtractor 260 PEAK SUPPRESS above different	
380	4"							8ci			
430								10ci			
HZ.								11ci			
373								12ci			
350	8"							13ci			
355	VERY POOR							14ci			
345	VERY POOR							15ci			
307	"							16ci			
266	"							17ci			
265	"							18ci			

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pg#2

Emulsion Batches:

Date 1992 Feb. 1/2 Observers Mki Tn Mak

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 5577	BIAS (4)								
5578	FLAT					04 00W	+17°	TUNG A:1/4	30sec
5579	FLAT					00 30W	−7°43	"	25sec
5581	MWC 560	07 21 01	−07 32 12	23 37 30	00 07 30	W	CCD5580 CCD5582	FeAr Clear	90sec
5584	HD87901	10 03 03	+12 27	00 16 00	00 18	E	CCD5583 CCD5585	"	"
5587	MWC 560	07 21 01	−07 32 12	00 26	00 56	W	CCD5586	"	30sec
5588	"	"	"	00 56 30	01 26 30	W	CCD5587	"	30sec
5590	BIAS (4)								
5591	MWC 560	07 21 01	−07 32 12	01 31	02 01	W	CCD5592	FeAr Clear	30sec
5593	FLAT							TUNG [illegible]	25s
5594	BIAS(4)								
5595	Comp. FeNe							FeNe [illegible]	60
5596	FLAT							TUNG CLEAR	5 min
5597	HD197433	20 38.6	+75 14	02 29 30	02 39 20	E			10 min
5598	Comp. "			02 52 20					60s

Spectr. Temp. ..... Dome Temp./Hum. -10°C ..... 6[illegible]% Transparency Conditions ..... Fine .....

Focus .... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS (CI)	G-6000 1800	200μ Full Length	Hα				
										MAX < 15K ADU	
774	6-10"	3q						19i	22i pgm	Full star (Vega) of pinhole on hand acquisition mask	
35000								20i	Telluric Std	Regulus (guider out)	
337	v. poor				G-4760 1800	200μ FULL	4845Å HP	21i	22i pgm	~~Perform Telluric Std~~	
233	4							22i	4		
										Dome T = -11°C	
250								23i	22i pgm		
							HP			12K max	
					G-4190 (1800)	200μ FULL	3940Å			CaII H+K region	
540	5"	V 73-77	G5V +K0V+K5V					25i	22i pgm		

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Date 1992 Feb. 1/2 Observers MKi/In/Mak

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO 5599	Bias (4)								
CCO 5600	comp.			0307				Fe Ne Clr.	60s
5601	HD84449	10 14.3	+19 59	0311	0329	01 40W			
5602	Comp							Fe Ne Clear	60s
CCO5603	Focus Test	(Comp Mode)	Feb 2 @	19 EST		00 W	+	Fe Ne clear	50
CCO5604	" "	(Stellar mode)				"	"	"	90
5605	"	Comp mode			1950	"	"	Fe Ne clear	90
5606	"	Stellar mode				"	"	"	150

Spectr. Temp. ..... Dome Temp./Hum. -11°C ... 60% Transparency Conditions Cloudy .....

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 1200 1800/34.5	300μ	3940Å				
1840		4.79	F6IV						stellar	R.V. Std.	
Set 6.90		T=-4.6°C		CASS CCD	G 1200 1800/34.5	300μ full	3940Å	27c	Focus Test	* CCD FAST 360 0 10 1024 40	
								28c	" "	stellar blue + spiral	
		T=-4.4°C			G 6000 1800/56°	200 Full	H α	29c	"	stellar + comp Ang 1 or 1	
								30c	"	no SAI FT for 3 pairs checked	
		All to		use Pkr	= REF secs						

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Emulsion Batches:

Date ..... Observers .....

FANS ON

Plate No.	Object	R.A. 1900 2000	Declination 1900 2000	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE04266	BIAS (4)								
4267	BIAS (4)								
4268	Comp							ThAr	5sec
4269	HD 48329			23:26:00	23:33:37	1:30:42W			
4270	HD 48329			23:35:14	23:45:50	1:42:54W			
4271	Comp							ThAr	5sec
4272	Comp							ThAr	5sec
4273	HD 58367			00:00:55	00:10:50	1:26:32W			
4274	Comp								5sec
4275	HD 58367			00:14:40	00:24:40				
4276	Comp								5sec
4277	FLAT					1:26W		TuDa	.5s
4278	FLAT					1:26W		TuDa	0.5s
4279	FLAT					1:26W		TuDa	0.5s
4280	FLAT					1:26W		TuDa	0.5s
4281	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -5.2°C / 65.5% Transparency Conditions ..... CLEAR .....

Focus ... 200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 1000 TSCALE 90 CC/MIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Ecmelle CCD		450μ x 100μ		1ci		7600Å x Grating	
								1ci			
13	≃5"	B 4.38	GBIb		0.580 17.00 (ECH)			2ci	SURFACE GRAVITY		
56	≃5"	B 4.38	GBIb					3ci	— " —		
								1ci			
		B 6.00	GG II					2ci			
								3ci			
		B 6.00	GG II					4ci			
								5ci			
						600μ					
						600μ					
						600μ					
						600μ					

Emulsion Batches:
.....
.....
.....

Date ..... Observers .....

PAGE 2

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO4282	DARK (15 min)					1:46:58W			900s
CCO 4283	BIAS (4)								
CCO 4284	DARK (15 min)					1:46:58W			

Spectr. Temp
Focus
Spectr. Temp
Exp Mtr

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Spectr. Temp. .... Dome Temp./Hum. -5.4°c/66.1% Transparency Conditions ....

Focus .200..................

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Ident.	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	9000									2ci			
					ILL TO PERSEUS AND WORM								

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Emulsion Batches: .....

Date ....FEB 5/6 1992.... Observers .....Srt [Fbr]..... .....

*FANS OFF .....

PG1

Plate No.	Object	R.A. ~~1900~~ 2000	Declination ~~1900~~ 2000	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04285	BIAS (4)								
ce04286	BIAS (4) ~~DARK (45 min)~~								~~900s~~
4287	DARK (15 min)			17:32:45	17:47:45	-0 49 00E	27 13 N		900s
4288	Comp							ThAr	5sec
4289	HD 20630	03 19 22	03 22 13	18:49:50	18:59:50	0 24 47W	32 34 5N		
4290	Comp							ThAr	5sec
4291	Comp							ThAr	5sec
4292	HD 20630	03 19 22	03 22 13	19:54:40	20:04:35				
4293	Comp							ThAr	.5sec
4294	Comp							ThAr	.5sec
4295	HD 20630 (λ=7771)	03 19 22	03 22 13	20:13:30	20:23:30				
4296	Comp							ThAr	1/5sec
4297	~~Comp~~ Comp	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~20:47:00~~			ThAr	~~1/5sec~~
4298	~~Comp~~ HD 20630	03 19 22	03 22 13	20:35:10	20:47:00			~~ThAr~~	~~1/5sec~~
4299	Comp							ThAr	

Spectr. Temp. ..... Dome Temp./Hum. ..... -3.1°C / 68.7% Transparency Conditions .... CLEAR .....

Focus ... .200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 1000 TSCALE 90 GAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NOT ON				ECHELLE CCD.	0 580 17.00 (ECH)	450μ x 100μ	7600Å	X Grating,			
NOT ON											
NOT ON											
NOT ON		B 5.51	GS IV	ECHELLE CCD	0.580 17.00 (ECH)	450μ x 100μ			SURFACE GRAVITY		
NOT ON											
NOT ON								1 c 2			
NOT ON		B 5 5 1	GS IV		0.530 18.9 (ECH)	500μ x 100μ		2 c 2	SURFACE GRAVITY		
NOT ON								3 c 2			
NOT ON								5 c 2			
NOT ON		B 5 5 1	GS IV			500μ x 100μ		6 c 2	SURFACE GRAVITY		
NOT ON											
NOT ON		B 5 5 1	GS IV			700μ x 100		1 c 2	SURFACE GRAVITY	DOME T = -6.8°C H = 72.6%	
NOT ON		B 5 5 1	GS V			700μ x 100μ		3 c 2			
NOT ON											

233

Emulsion Batches:

Date ~~Feb~~ 5/6-92 Observers Srt [Fbr]

Pm2

Plate No.	Object	R.A. 1900 2000	Declination 1900 2000	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceφ4299	Comp							ThAr	1/5 sec
4300	Comp								
4301	HD 48329 (λ = 8446Å)	06 43 56	25 07 52	21:01:30	21:07:30				
4302	Comp							ThAr	1/5 sec
4303	~~HD~~ Comp							ThAr	1/2 sec
4304	HD 48329 (λ = 7771)	06 43 56	25 07 52	21:18:06	21:27:46	-0 32 05E		~~ThAr~~	~~one~~
4305	Comp							ThAr	.5 sec
4306	Comp							ThAr	.5 secs
4307	HD 48329 (λ = 7200Å)	06 43 56	25 07 52	21:34:47	21:43:47	-0 16 51E			
4308	Comp							ThAr	.5 sec
4309	BIAS(4)								
4310	FLAT (7200Å)					2 40 38W	19 53 6N	TuNa	3 sec
4311	FLAT (7200Å)					2 40 38W	19 53 6N	TuNa	---
4312	FLAT (~~7200Å~~)					2 40 38W	19 53 6N	TuNa	---
4313	FLAT (7771Å)					2 40 38W	19 53 6N	TuNa	1/2 sec
4314	FLAT (~~7771Å~~)					2 40 38W	19 53 6N	TuNa	---

Spectr. Temp. ..... Dome Temp./Hum. -6.9°C/73.1% Transparency Conditions SEMI-CLOUDY 234

Focus 200 CLOUDY 2 @ 21:45

Spectr. Temp. ..... Dome Temp./Hum. ..... TSCALE=100tscale 90 cgain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NOT ON				ECHELLE				3ci			
NOT ON								4ci			
NOT ON		B 4.38	gBIb		0.485 18.0 (ECH)	700µ x 100µ		5ci	SURFACE GRAVITY.		
NOT ON								6ci			
NOT ON						~~700µ x 150µ~~ → 450µ x 100µ					
NOT ON		B 4.38	gBIb		0.51 17.5 (ECH)	~~700µ x 450µ~~ → 700µ x 100µ		2ci	SURFACE GRAVITY		
NOT ON								3ci			
NOT ON					0.53 18.9 (ECH)			4ci			
NOT ON		B 4.38	gBIb		0.53 18.9 (ECH)	~~700µ x 450µ~~ → 450µ x 100µ		5ci	SURFACE GRAVITY	DOME T = -6.8° H = 73.9%	
NOT ON								6ci			
NOT ON					0.53 18.9 (ECH)			1ci			
NOT ON					0.53 18.9 (ECH)	900µ x 100µ		1ci			
NOT ON						900µ x 100µ					
NOT ON						900µ x 100µ					
NOT ON					0.51 17.5 (ECH)	900µ x 100µ					
NOT ON					0.51 17.5 (ECH)	400 x 100µ					

Emulsion Batches: .....

Date ~~Feb~~ 5/6-92 Observers Sst [Pbr] .....

Pg 3

Plate No.	Object	R.A. ~~1900~~2000	Declination ~~1900~~2000	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4315	FLAT (7771Å)					2 40 38W	19 53 6N	ToDa	½ sec
4316	FLAT (8446 Å)					2 40 38W	19 53 6N	ToDa	½ sec
4317	FLAT (8446 Å)					2 40 38W	19 53 6N	ToDa	½ sec
4318	FLAT (8446 Å)					2 40 38W	19 53 6N	ToDa	½ sec
4319	FLAT (6130 Å)					2 40 38W	19 53 6N	ToDa	½ sec
4320	FLAT (6130 Å)					2 40 38W	19 53 6N	ToDa	½ sec
4321	FLAT (6130 Å)					2 40 38W	19 53 6N	ToDa	½ sec
4322	BIAS (4)								
4323	DARK (15 min)								
4324	Comp							ThAr	5 sec
4325	HD 84485 (λ 6130)	10 19 59	19 50 25	00 36 05	00 46 27	-0 48 10E	19 55 15N		
4326	Comp							ThAr	5 sec
4327	Comp							ThAr	5 sec
4328	HD 101501 (λ 6130)	11 41 03	34 12 05	01 07 40	1 18 04	-1 37 15E	34 17 33		
4329	Comp							ThAr	5 sec.

Spectr. Temp. ..... Dome Temp./Hum. -6.6°C/74.7% Transparency Conditions ... Cloudy 2 23'00 236

Focus ... 200 .....

Spectr. Temp. ..... Dome Temp./Hum. -7.0°C/74.7% @ 2300

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NOT ON				ECHELLE	0.51 17.5 (ECH)	900μ x 100μ					
NOT ON					0.485 18.0 (ECH)	900μ x 100μ					
NOT ON					0.485 18.0 (ECH)	900μ x 100μ					
NOT ON					0.485 18.0 (ECH)	900μ x 100μ					
NOT ON					0.58 17.0 (ECH)	600μ x 100μ					
NOT ON					0.58 17.0 (ECH)	600μ x 100μ					
NOT ON					0.58 17.0 (ECH)	600μ x 100μ					
NOT ON					0.58 17.0 (ECH)	450μ x 100μ					
NOT ON		B 4.57	G7 III		0.58 17.0 (ECH)	450μ x 100μ		2 ci			
NOT ON								3 ci			
NOT ON								4 ci			
NOT ON		B 6.06	G8 V		0.58 17.0	450μ x 100μ		5 ci			
NOT ON								6 ci			

Emulsion Batches: .....

Date ~~Feb~~ 5/6-92 Observers Srt [Fbr] .....

Page 4

Plate No.	Object	R.A. ~~1900~~ 2000	Declination ~~1900~~ 2000	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4330	Comp							ThAr	.5sec
4331	HD 101501 (λ = 7200)	11 41 03	34 12 05	01:32:10	1:40:10	-1 15 46E	34 17 33 N		
4332	Comp							ThAr	.5sec
4333	Comp							ThAr	.5sec
4334	HD 101501 (λ = 7771)	11 41 03	34 12 05	01:51:04	01:59 04	-0 56 41E	34 17 33 N		
4335	Comp							ThAr	0.5sec
4336	Comp							ThAr	0.5sec
4337	HD 101501 (λ 8446)	11 41 03	34 12 05	02 09 20	02 17 52		34 17 33 N		
4338	Comp							ThAr	0.5sec
4339	Comp							ThAr	0.5sec
4340	HD89485 (λ = 8496)	10 19 59	19 50 25	02 30 26	02:3526	1 3 54W	19 55 30N		
4341	Comp							ThAr	0.5sec
4342	Comp								
4343	HD 89485 (λ = 7771)	10 19 59	19 50 25	02 44 59	02 52 59	1 18 30W	19 55 30N		
4344	Comp							ThAr	0.5sec

Spectr. Temp. ..... Dome Temp./Hum. -7.2 / 76.8% Transparency Conditions ..... CLEAR 238

Focus ..... 200 ..... 20130 -7.2 / 76.8%

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NOT ON				ECHELLE	0.53 18.9	700µ x 100µ		1ci			
NOT ON		B 6.06	G8V		0.53 18.9	700µ x 100µ		2ci	SURFACE GRAVITY		
NOT ON								3ci			
NOT ON								4ci			
NOT ON		B 6.06	G8V		0.51 17.5 (ECH)	700µ 150µ		5ci	SURFACE GRAVITY	T = -7.3 Hum = 76.6%	
NOT ON								6ci			
NOT ON					0.455 18.0	700µ x 100µ					
NOT ON		B 6.06	G8V		0.485 18.0	700µ x 100µ			SURFACE GRAVITY		
NOT ON											
NOT ON											
NOT ON		B 4.57	G7III		0.455 18.0	700µ x 100µ			SURFACE GRAVITY		
NOT ON											
NOT ON					0.51 17.5 (ECH)	700µ 100µ				T = -8.0° Hum = 78.2%	
NOT ON		B 4.57	G7III		0.51 17.5 (ECH)	700µ x 100µ			SURFACE GRAVITY		
NOT ON											

239

Date ... Feb 5/6 - 1992 ... Observers ... Srt [Fbr] ...

PGS

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4345	Comp							ThAr	.5sec
4346	HD 89485 (λ=7200)	10 19 59	19 50 25	03:05:52	03:05:52	14 45 W	19 55 30N		
4347	Comp							ThAr	.5sec
4348	Bias (4)								
ce 04349	Inboard Focus } Filter IN			FEB 6/92 JAN 6/93 1930 EST			RG610 Filter	ThAr clear	3/20 sec
4350	Outboard Focus }					03 W	"	"	"
4351	Outboard } Filter OUT					+23° Dec	Filter OUT	"	"
4352	inboard }						"	"	"

Spectr. Temp. ..... Dome Temp./Hum. @256 -78/77.9% Transparency Conditions ..... CLEAR: 240

Focus ..200.....

Spectr. Temp. ..... Dome Temp./Hum. .....

100 tscale ; 90 cgain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NOT ON				ECHELLE	0.53 18.9	700µ x 100µ					
NOT ON		B 4.57	G7 III		0.53 18.9	700µ x 100µ			SURFACE GRAVITY		
NOT ON											
			ALL TO PERSEUS AND						WORM,	including Focus Tests	
CAMERA FOCUS .200 T = -23°C								1ci	7600Å GRATING		
		7200Å		Echelle CCD	0.53 18.9	700µm Length 100µm width		2ci		outboard Right On.	
		setups		x grating	0.53			3ci		OUTBOARD SHIFT Rel=1pixel	
								4ci			

241 pg #1 Fri - Sat

Date 1.4.9.2. Feb. 7/8..... Observers [Rm]V..T.s./..F.br.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05607	BIAS (4)			18 34					
5608	Comp							FeAr Clear	90sec
5609	HD30782	04 41 05	+36 32.6	18 49 40	19 38 40	00 27E			
5610	Comp							FeAr Clear	90sec
5611	BIAS (4)								
Fm000430.TM	HD24587	04 34.5	+41 57	19 50		00 00	42 09	"N" mode	
5613	HD 24587	"	"	20 02 50	20 17 20	00 28 W	CC05612 CC05614	FeAr Clear	90sec
5616	HD 44490	06 19.8	+07 08	20 28	20 49 30	00 43E	CC05615 CC05617	"	"
5618	BIAS (4)								
5619 5621	FLATS x 3					00 30E	+7° 08	TUNG A=1/2	8sec
5622	BIAS (4)								
5624	HD 67509	07 39.2	+28 16	21 12	21 28	01 24E	CC05623 CC05625	FeAr Clear	90sec
5626	DARK 15m			21 50					
CC05627 5628	Focus tests	Comp/stellar posns		23 40		03 27E	+12°	FeAr Clear	30/60

Spectr. Temp. ..... Dome Temp./Hum. -4.5°C 73% Transparency Conditions ..Pt.Cl.Cloudy..... 242

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.4°C 73% (CENTRAL)

90 Cgain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
									480 0	50 1024 4 1 CCDFMT	
2820	6"	B 79-8.8	F6 -G1	CASS CCD	G=5930 1800/5.3	200u Full Length	645Å	4ci	Rm pgm	(above background) Sum 1IUG of 5 columns = 5/100 ADU	
								5ci			
								~~6ci~~			
4 Frames	Poor	V 7.29	dG2	Int →	1/15 sec .067ms	200u (lower Right)	~~f/11~~		(FANS OFF) seeing test	no wind Dome west S west	
1300	4"	V	4					2ci	std vel		
1060	4"	B 6-5-80	F7Tab -K1Tab					5ci	Rm pgm	cloudy - very cloud Pond T = -06°C	
										13k MAX AIR level	
										-5.6°C Pond T	
3700	4"	B 2.14	KOMA				std vel	9ci	std vel	v cloudy	
										(Focus FORMAT 360 0 10 1024 40 1)	
						200u Full Length		12ci 13ci	Focus Test	T = -5.4°C set 6.90	
							ALL TO	PERSEUS	AND	WORM.	

243 Pg #1 SAT SUN

Date 1992 Feb 8/9 .... Observers [Bln] [Rkn] To / Fkt + FANSON!

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05629	BIAS(4)								
CC05631	HD 37479	05 33 45	-02 38 48	18 24	19 16	01 26 E	CC05630 CC05632	FeAr Clear	90sec
5633	BIAS(4)								
563A	HD 37479	05 33 45	-02 38 48	19 21	20 11	00 32 E	CC05635	FeAr Clear	90sec
5637	HD 36485	05 26 54	-00 21 30	20 19	21 19	00 43 W	CC05636 CC05638	"	90sec
5640	HD 37479	05 33 45	-02 38 48	21 26 30	22 12 30	01 30 W	CC05639 CC05641	"	90sec
5643	HD 87901	10 03 03	+12 27 22	22 23	22 25	02 45 E	CC05642 CC05644	"	90sec
5645	BIAS(4)								
CC05646 5654	FLATS x 9			22 28		02 40 E	+12°	TUNG A=1/2	
5656	HD 87901	10 03 03	+12 27 22	22 45	22 48	02 22 E	CC05655 CC05657	FeAr Clear	90sec
5658	Bias (4)						~~CC05654~~	~~FeAr~~ Clear	
5660	HD 44990	06 19 38	+07 08	23 03 50	23 19	01 51 W	CC05659 CC05661	"	90sec
5662 5664	FLATS x 3			23 22				TUNG A=1/2	8sec
5665	DARK 2m			23 30					120
5667	HD 103095	11 47.2	+38 26	01 52	02 09	00 47 E	CC05666 CC05668	FeAr Clear	90sec

Spectr. Temp
Focus
Spectr. Temp
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. -8.5°C ... 57% Transparency Conditions ..P.&A.T. Cloudy 244

Focus .....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. -12°C ... 60%

AURORA seen after 3OEST

90CGAIN T = → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6050 1800/		G=6050 6600Å		480 0	50 1024 4 1 CCDFWT	
11,090	4"-8"	V 6.53	B2V pe	(HeS)		200μ Full Length		3ci	B1a Hα σ Ori E	3000 Sony Tek2240-2 Dave Bruton	
										Dome T = -9.8	
12,000	6"	V 6.53	B2V pe	(He St)	AURORA CONTAMINATION			6ci	B1a Hα σ Ori E	12K Sum Avg 1024 clear Skyfield	
11,600	4"-6"	V 6.85	B2V sn	(HeS)			III 950525	7ci	B1a Hα σ Ori C	Note Aurora seen, possible Band South 10° from Horiz	
9000	3"-5"	V 6.53	B2V pe	(He St)				8ci	B1a Hα σ Ori E	Cloud ated	
40000		V 10.86	B7V					10ci	Telluric Std	guided 4K MAX ADU/pixel	
								Hα Gr		Dome T = -12.0°C	
								14ci 22ci		13K MAX ADU/pixel	
cc 120		V 1.36	B7V				NOT 6600Å III 950525	14ci 16ci	Telluric Std	guided 8K MAX ADU/pixel Dome T = -12.5°C	
740	4"	B 6.5-8.0	F7Ib -K1Ib					16ci 18ci 20ci	Rm pgm	Thin cloud 14K MAX ADU/pixel	
									* Std tel	* some cloud + AURORA	
1666	5"	V 6.45	G8V p								

245
pg #2

Date 1992 Feb 8/9 Observers F.Bx./J.Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FM000421.Tn	HD103095	11 47.2	+38 26	02 12		00 43E	+37 49	1/15 Sec	
CCD 5669 5670	Focus Test	(Compl/Stellar pairs)		02 26		0 0	+10°	Fe Ar Clear	30/60

Spectr. Temp
Focus ... 6
Spectr. Temp
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Cloudy again ...

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. ... -14.2°C 54% ...

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
"N" mode	poor	Dome SSW			Imp flower	200μ Right of slit			seeing test	Thin -> thick cloud	
Set 690	T= -14.2°C			CASS CCD	G ~~60~~ 5930 1800	300μ Full	6550Å	1 cc 2 cc	360 010	1024 400 1 CCD=INT	

247 pg#1 sun-mon

Emulsion Batches: .....

Date ..1992 Feb 9/10... Observers .Bln/Tn/Bahcall/Shelton .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05671 5672	Focus Test	Comp/	Stellar Hum	Twilight pos'n		0 0	+20°	FeAr Clear	30/45
5673	BIAS(4)			18 44					
5675	HD 36485	05 26 54	-00 21 30	19 00	19 45	00 48 E	cc05674 cc05676	FeAr Clear	90sec
5678	HD 37479	05 33 45	-02 38 48	19 53 40	20 24	00 14 E	cc05677 cc05679	"	90sec
5680	HD 37468	05 33 42	-02 39	20 29	20 34	0005 E	cc05681	"	90sec
5683	HD 35502	05 20 00	-02 54 22	20 41	21 41	01 15 W	cc05682 cc05684	"	90sec
5685	BIAS(4)								
5687	HD 36485	05 26 54	-00 21 30	21 52	22 31	02 00 W	cc05686 cc05688	FeAr Clear	90s
5690	HD 35502	05 20 00	-02 54 22	22 40	23 40	03 15 W	cc05689 cc05691	"	"
5692	BIAS(4)								
5694	HD 37901	10 03 03	+12 27	23 49	23 50	01 18 E	cc05693 cc05695	FeAr Clear	90s
5696 5704	FLATS	x9				01 06 E	+17°	TWIG A=1/2	7sec
5706	HD 37901	10 03 03	+12 27	00 10	00 11	0057 E	cc05705 cc05707	FeAr Clear	90sec
5709	HD 44990	06 19 8	+07 08	00 21	00 36	03 12 W	cc05708 cc05710	"	90sec
5712	HD 62509	07 39.2	+28 46	00 48	00 49	02 04 W	cc05711 cc05713	"	90sec

Spectr. Temp. ..... Dome Temp./Hum. -12°C 51% Transparency Conditions ... Fine

Focus 6.90

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 CGAIN T -> -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
"Bl" Li				CASS CCD	G=6030 1800	200u Full Length	Hα	~~3ci~~ ~~4ci~~	T=-12 set 690	Stellar vs Si blue shifted	
										Dome T = -12.6°C	
11,300	3"	V 6.85	B2V$_{sm}$					4ci	Hα pgm		
10,100	3"4"	V 6.53	B2V$_{pe}$					5ci	Hα pgm		
20,000		B 3.51	O9.5V					6ci	Hα pgm		
7,100	3"4"	V 7.36	B5V$_{sm}$ (Ho W)					7ci	Hα pgm		
										Dome T = -14°C	
9,750	3"	V 6.85	B2V$_{sm}$					8ci	Hα pgm		
6,300	4"6"	V 7.36	B5V$_{sm}$					9ci	Hα pgm		
										Dome T = -15°C	
30,000		V 1.36	B7V					10ci	Regular telluric Std	3k max ADC if need	
							Hα				
30,000		V 1.36	K7V		G=5930 1800	200u Full	6450Å	11ci	telluric Std		
31,700	3"	B 6.5-6.0	F7Iab-KIIab		"	"	"	12ci	Rm T mon pgm		
20,000					"	"	"	13ci	S-H bel	B Gem	

249 pg #2

Emulsion Batches:

Date 1992 Feb 9/10 Observers Th for Bm

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05715	HD 90861	10 24 3	+79 05	00 58	01 08	00 32E	cc05714 cc05716	FeAr Clear	90s
FM000422 Th	"	"	"	01 10		00 70E	"N" Mode	67 ~~Fringe~~	1/15s
cc05717	BIAS(4)								
cc05719	HD176053	14 18 1	+01 43	01 22	01 34	3 48E	cc05718 cc05720	FeAr Clear	90s
cc05721	BIAS(4)			01 40					
5722 5724	FLAT x3					0 0	+30°	TUNG ~~FeAr~~ ~~Clear~~ Ap = 1/2	8s
cc05725 5726	Focus Test	Comp/stellar	Hair	01 50 Trans posns		0 0	+30°	FeAr Clear	30/45
				Feb 10/11	Tests	for Rg	OBS Request		
cc05727 5728	Focus Test	Comp/stellar		19 46		0 0		FeAr Clear	30/70

Spectr. Tem
Focus .. 6.9
Spectr. Tem

Exp Mtr.

Spectr. Temp. ..... Dome Temp./Hum. -14.8°C 70% Transparency Conditions ... Fine

Focus .. 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. -15.3°C 72% No Fans tonight as is convention. No wind. Dome facing SW for seeing test

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3,100	3"	F/20	K2 III	CASS CCD	G=5930 1800/5514	200u Full L	6450Å	14i	std vel	The Brighter star NE of pair	P-R
55x55 pixels	4 frames "	"	"	4 frames with OID Grism on 200u Slit at Lower Right						Seeing Test. Dome T = -15.1°C	
7,700	3"-5"	6.27	G IV				6450Å	~~15i~~	std vel		
										Dome T = -15.3°C	
							6550Å	15i 16.7		13K MAX 1104	
					G 5930 1800/5514	200u FULL	6450Å	18 19	Focus test	T = -14.8°C Set 6.90 Stellar Blue 15 pixels	
				All to the Perseus e WORM							
					G=4420 1800/41.9						
					G=4435 1800/				4216 - 4419 Å		
T = -5.6		Set = 6.90			G= 4430 1800/41.8	200u Full Length		6i 7i	Stellar shift Blue < 1 pixel	CCD EDIT 360 010 1024 40 1	
									4206 - 4415		

251
pg#1 Tues/Wed

Date 1992 Feb 11/12 Observers [rG]/Jh

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO 5729 5730	Focus Test	Comp/Stellar HeRTim Ann Pairs			18 40	00 15E	+16°	FeAr Clear	60/80
5731 5732	Focus Test	"	"		18 50			"	50/70
5733	BIAS(4)						~~CCO5733~~		
5735	HD77371	04 14 06	+15 23 11	19 46	20 16	01 05 W	CCO5734 CCO5736	FeAr Clear	200s
5737	BIAS(4)								
5739	HD77697	04 17 10	+17 18 29	20 38	21 11	01 57W	CCO5738 CCO5740	FeAr Clear	300s
5742	HD78305	04 22 47	+18 57 31	21 24	22 04	02 44W	CCO5741 CCO5743	FeAr Clear	150s
5745	HD78307	04 22 52	+15 44 25	22 13 30	22 58 30	03 39W	CCO5744 CCO5746	"	"
5747	BIAS(4)								
5748 5749	FLATS x2	(90sec → 2800 ADU MAX)		300secs	8500 ADU MAX	03 50W	+16°	TUNG Clear	90s 300s
5751	HD40035	05 51 18	+54 17 05	23 22	00 02	03 11 W	CCO5750 CCO5752	FeAr Clear	150s
5754	HD62509	07 39 17	+78 16 04	00 12 30	00 18 30	01 43 W	CCO 5703 CCO5755	"	"
5756	BIAS(4)								
5757	FLAT 7mins							TUNG Clear	420s
5759	HD96833	11 04 03	+45 02 28	00 38	01 08	00 53 E	CCO5758 CCO5760	FeAr Clear	90s

Spectr. Temp. ..... Dome Temp./Hum. -8.3°C .... 56% Transparency Conditions PART. Cloudy
SNOW at FIRST
Focus set to 7.10 → 7.00
Spectr. Temp. ..... Dome Temp./Hum. -17.7°C 51% (constant)
40 CCHAN T → -100

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Set	7.10	T=-8.3°C	CASS CCD	G=4430 1800/	200μ FULL	4300Å	1ci 2ci	Focus Tst	stellar Acct 1 pixel 360 0 10 1024 40 1 CCD FMT	
	set	7.00	T=-7.9°C					3ci 4ci		Stellar Right on (nearly fit)	
										Dome T = -10.5°C	
53,400	8"	B 4.64	KO III					~~3ci~~	rG Giant	500 0 180 1024 1 1 CCD FMT	
				default Stats box		141.229 ~ 1.287				K = 8000 Adj sum avg above / beyond Only st > 100 + S/N	
63,000	6"-10"	B 4.74	KO III					3ci	rG Giant	12K 400 Mask Temp = Econ = +10°C	
96,300	4"-10"	B 4.54	KO III					4ci	"	17K 400 sum avg above beyond	
80,400	4"-5"	B 4.79	KO III					5ci	"	13K 400 summing Moon = 15° W of 45	
										Dome T = -16.2°C	
								~~6ci~~	K 5min FLAT		
107,000	5"-8"	B 4.72	KO III					7ci	rG std	20K 400 Sum Avg above beyond	
165,000	5"	B 2.14	G8 III					6ci	" 1150	RV std 40K 400 Sum Avg (4000 S/N)	
										Dome T = -17.5°C	
								1ci		12.5K 400 1189X	
155,000	5"-8"	B 4.15	K1 III					8ci	rG std	24K 400 Sum Avg > 3000 S/N	

253
Pg #2 Tues/Wed

Date 1992 Feb 11/12 Observers [J.G.] ... mki. clocking on me

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05762	HD113226	12 57 12	+11 29 48	01 19 30	01 39 30	02 14 E	CC05760 CC05763	Fotr Clear	150sec
5764	BIAS(4)								
5765 – 5767	FLATS x3					02 E	+11°	Tung Clear	420sec
5768 5770	FLATS x3	during Topup		02 11		0 0	+30°	"	"
5771	BI FLAT					0 0	+30°	"	"
5772 5773	Focus Test	comp / stellar	Hartmann pairs	02 50		0 0	+30°	Fotr Clear	50/70
5774	DARK 20min			03 07		0 0	platform		
5775	BIAS (4)					"	"		

Spectr. Temp
Focus 7.0
Spectr. Temp

Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. 17.7°C ... 50% Transparency Conditions ... Fine ... 254

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. -18.2°C ... 3%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
98400	5-10"	B 3.77	G8 III	CASS CCD	G=4430 1800/	200u Full Length	4206Å to 4415Å	9c;	F G std	13K ADU Sum Avg of 3 Scds	
										Dome T = -17.5°C	
										13K max ADU of Red end	
								3c;			
	T = -18.1°C set 7.00				G=4430 1800/	200u	"	10c; 11c;	Focus Test	Stellar Blue 5 pixels 360 0 10 1024 40 1 1047	
					All to Perseus and WORK						
										Dome T = -17°C	

anson Exp

255 pg #1 Wed Thurs

Date 1992 Feb 12/13 Observers [illegible] / Tim

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO5776	BIAS(4)								
5778	MWC 560	07 21 01	-07 32 12	19 27	19 57	2 17E	CCO5777 CCO5779	FeAr Clear	40s
5780	"	"	"	20 00 30	20 20 30	1 53E	CCO5781	"	40s
5782	BIAS(4)								
5783	MWC 560	07 21 01	-07 32 12	20 27	20 57	1 17E	CCO5784	FeAr Clear	40sec
5785 5787	FLATS x 3	} white still on MWC 560						TUNG Clear	25sec
5788	BIAS(4)								
5789	MWC 560	07 21 01	-07 32 12	21 10	21 37	0 36E	~~CCO5790~~	FeAr Clear	40s
5790	MWC 560	"	"	21 43	22 13	0 01E	CCO5791	FeAr Clear	40s
5792	MWC 560	"	"	22 16	22 46	0 33W	CCO5793	"	"
5795	HD84441	09 40.7	+24 14	22 55	22 57	1 36E	CCO5794 CCO5796	"	"
5798	"	"	"	23 03	23 06	1 27E	CCO5797 CCO5799	FeAr Clear	90s
5801	MWC 560	07 21 01	-07 32 12	23 16	23 36	1 23W	CCO5800 [illegible]	"	"
5802	"	"	"	23 37	23 57	1 44W	CCO5803	"	"
5805	HD87901	10 03 03	+12° 27	00 06	00 12	0 44E	CCO5804 CCO5806	"	"

Spectr. Temp. ..... Dome Temp./Hum. -9.1°C ... 61% Transparency Conditions .. Part Cloudy - hazy 25C

Focus .... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. -10.3C 66.7% 90CGHin T -> -100C

480 0 50 1024 4 1 CCDMIT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=4760 1800	200u Full length					
520	2"-3"	÷9	Em				Hβ	3ci	Inkt. pgm	Hβ 520 400u min AVG CONT 250 400u min AVG clear beyond	
344	2"-5"						"	4ci	"	Smoke cloud - end - temp	
										Dome T = -9.6°C	
530	2"-3"							5ci	Inkt. pgm	thin cloud L->R DRIFT during Exp (of image)	
								6ci		17K MAX 400 / pixel	
										Dome T = -9.7°C	
548	2"							7ci	Inkt. pgm	Cloud at end	
610	2"-3"							8ci	"	clear again, SEAT OF	
600	2"							9ci	"	thin cloud	
12000		B 3x8	Glass		G=4760 1800		Hβ	10ci	Stavel		
14000	3"	V 2.98	"		G 6000 1800	200u Full length	Hα	11ci	Stavel	"	
350	2"	39V	Em		"	"	"	12ci	Inkt. pgm	thicker cloud bands	
400	2"-3"				"	"	"	13ci	"	less cloud, at end	
30000		V 1.36	BTII		"	"	V	14ci	Telluric Std	Cloudy Twilight	

257 pg#2

Date 1992 Feb 17/18 Observers [illegible] T.L

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05808	HD90861	10 24 17	+29 05 35	00 22	00 33	00 44 E	cc05807 cc05809	FeAr Clear	90sec
FM000423.Th	HD90861	"	"	00 35		00 47 E	+29°	'N' male	67 msec Int
cc05810	BIAS(4)			00 40		"	"		
5811 5813	FLATS x3			00 44		"	"	TUNG 4=1/2	7 sec
cc05814 5815	Focus Test	Comp/	Stellar pairs	00 50		00 28	+29°	FeAr Clear	30/45
cc05816	Focus Test	Comp	in CCD3	≈ 01 30		0 0	+20°	FeAr Clear	30sec
5817	Focus Test	Stellar	in CCD3					"	45sec
5818	DARK with CCD3					0 0	platform		900sec

Note to Stan - I got back in with Dos 128K windows up 1st, then CCD3 from BIGDOS.

Then Rewrote cc05816.fts

Spectr. Temp. ..... Dome Temp./Hum. -10.4°C ... 66.3% Transparency Conditions ... Cloudy ... 258

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. -10.7°C ... 68% ∂ central

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2200	<2"	V 6.9	K2III	CASS CCD	G=6000 1800	200μ Full length	Blue of 17α	15c;	stdvel	medium un. fuzzy cloud	
31×31 pixels	"	"	"			"	"		seeing test	no wind obvious Funs weaken all night	
							"			Dome T = -10.6°C	
							"	16c;		12K MAX ADU / pixel	
		T = -10.6°		Set 7.00	G=6000 1800	"	"	17c; 18c;	Focus Test	Stellar 5' Rad .3 pixels 360 0 10 1024 4c 1 average	
							Backed	up	to warm c	Reasons to 5815	
		T = -10.7°		Set 7.00	G=6000 1800/SA8	"	"	17c;	I used BIGDOS window in DV		
								18c;	no other windows brought in.		
									TO 5818 Feb 14 - IL		

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Emulsion Batches:

Date 1992 Feb 19/20 Observers T.Hg/J.Tn/J.Fbr — Cloudy Night/Tests

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce04353. fts	Focus Test	OUTBOARD Posn		21 30		03 00W	+30°	ThAr	10sec
4354 fts	" "	INBOARD Posn						"	"
4355	focus test	~~In~~ BOARD Posn		2225		03 00W	+30°	"	"
4356	" "	OUTBOARD Posn						"	"
~~4357~~	" "	~~INBOARD~~							
~~4358~~	" "	OUTBOARD							
	Note: between Pre "null" result and Pre final focus test (~ 5m) Pre line found @ col 29 Row 958 shifted to (col 29) Row 965 For no apparent reason.								
	mini Flexure Test	not written.				0 0	~~Pre Focus~~ 0°	ThA	10s
	"					0 02.5W	~~300~~ 0°	"	"

Spectr. Temp
Focus ..22
Spectr. Temp
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. +1.8°C ....90% Transparency Conditions ..... Cloudy 260

Focus .220 - .230 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Echelle TILT = 18.60 90C GAIN T = -130°C 200 0 64 1024 8 1 CCD

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit width	Emulsion	P.H.	Program	Remarks	Quality
Set	.220	T = +1.8°C		Echelle CCD	5000Å grating 600l/m / .455	.277	* 4481 Å	1 c	.195 Height Focus Test	* Fds λ CRiTeria	
By			Note: X The ORDER of OUT/in Reversed From NORMAL					2 c		Inboard Shift of Plate = 1.5 pixels	
Set to ~~.230~~		T = +1.6°C						9 c		~~Inboard Shift~~	
	~~.235~~ .2735							10 c		Out BOARD Shift Rel 1.5 pixels	
	~~.235~~	~~T = +1.8°C~~						~~8 c~~	~~Out Board Inboard Shift~~	~~No Shift~~	
								~~10 c~~	~~OUT BOARD Shift~~		
								4 c		0 0 64 1024 8 1 CCD FAST	
								5 c		No Inboard Shift	

261 pg #1

Emulsion Batches: .....

Date 1992 Feb 21/22 Observers [KK] Tty/Tu/KK in person .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo4357	BIAS(4)			1818 20				~~FLA~~	10s
4359	HD 34029	05 09 18	+45 54	190800	191745	00 11E	ceo4358 ceo4360	ThA	10s
4361	"	"	"	192510	194010	00 11W			
4362	Comp							ThA	10s
4364	HD 47105	06 31 54	+16 29	195130	203630	00 13 E	ceo4363 ceo4365	ThA	10s
4366	Comp							ThA	10s
4367	HD 60509	07 39.2	+28 16	204207	210210	00 55E			
68	Comp							ThA	10s
69	BIAS(4)								
ceo4370 4372	FLATS 9" x 3	(3 sets of Flat 9.15s Batch)				01 45W	+35°	ThNe	15s
4373	Bias (4)								
4374	Comp for Hα Region							ThAr	50s
4375	HD 34029	05 09 18	+45 54	213800	220000	02 31W			
4376	Comp							ThAr	50s
4377	HD 34029	05 09 18	+45 54	220345	221100	02 42W			

Spectr. Temp. ..... Dome Temp./Hum. -4.0°C ... 67% Transparency Conditions . Clouding i.e. gradually ... 262 Hazy

Focus ... 215 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCDT → -100°C

30 CGAIN 0 0 256 1024 4 1 autoT

5000 Å Blaze Grating

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	.4570 600 l/mm	60u width = .277 60u Height = .205				Echelle Grating Tilt = 18.90	
10,000		V 0.08	G6 III	+ G2 III			4481 Å	4ci	KK pgm		
15,612								5ci	"	CK on Ax Hle spiral	
4890	4"	B 1.9	A0 IV					6ci	KK pgm		
7300	2"5"	B 2.14	K0 III b					7ci	Stdvel		
										Δ rve T = -5.7°	
						60u width 800u Height for Flats					
					.2840 600 l/mm	60u 60u	Hα Region			Echelle Grating to 19.40°	
at 100+ scale: (5 set exp)										MAX 7000 for star line	
11,200 (5 secs actual)	2"3"	V 0.08	G6 III + G2 III				Hα	2ci	KK pgm	Saturated on Hα lines	
5000								3ci		8K MAX	

263 pg #2

Emulsion Batches: .....

Date 1992 Feb 21/22 Observers KK/JTy/JTw ....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04378	Comp for HD34029							ThAr	5s
4379	Comp for HD47105							"	55
4380	HD47105	06 31.9	+16 29	22 18	22 48	01 58W			
4381	Comp							ThAr	5sec
[4382	Comp] written over		Noir 4382 this is BIAS(10) done at 2327EST					"	"
4383	HD62509	07 39.2	+78 16	225520	23 15 20	01 18W			
4384	Comp							Th Ar	5sec
4385 4386	comp HD87901	10 03 03	+12 27	233230	000330	0017E			
87	comp							ThAr	.5sec
ce04388 → 4390	FLATS 9 x 3		Note This Batch Resulted in saturation next time used			0000	+12°	TUNG	2 secs
4391	BIAS (10)					"	"		
ce04392	Focus Test	INBOARD		01 40		0220W	+16°	ThAr	5sec
4393	"	OUTBOARD				"		ThAr	5sec

Spectr. Temp. ..... Dome Temp./Hum. -6.3°C ..69% Transparency Conditions ... Part. Cloudy - Hazy.....

Focus ..215.....

Spectr. Temp. ..... Dome Temp./Hum. .....

30 C GAIN

CCD T = -101.4°C = 22 FST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	.2840 600l/mm	60u width 600u	Hα			Echelle Grating tilt = 18490	
4375	2"-4"	B 1.9	A0 V					4ci	4k pgm	6K ADU MAX	
										Dome T = -6.3°C	
650	2"-3"	B 2.14	K0 III b					5ci	Stlvel	cloud again	
5300	3"-4"	V 1.36	B7 V					7ci	telluric Std	MAX 8000 ADU pixel clearing a bit - Hazy	
note 200 BS with 100 t scale						60u width 800u Height				MAX ADU 5000 pixel	
										Dome T = -6.8°C	
	Temp = -6.0°C Set .215					60u 600u Height	Hα	8ci	200 0 64 1074 s 1 ccd Emt		
	(No Filter in place of course)							9ci	out Stlvel Red 16 pixels		
						11.1 to 11.3		Perseus			

265

pg #1 sun/mon

Date 1982 Feb. 23/24.... Observers [H.K.] ... T.H.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo 4394 v	BIAS(4)	at HD87901 pos'n							
4395 v	Comp			(1500 secs Exp)				ThAr	4sec
4396 v	HD87901	100303	+12 27	20 45	21 10	03 03 E			
4397 v	Comp							ThAr	4sec
4398 v	Comp			[Exp 600sec]				"	"
4399 v	HD 34029	050918	+45 54	21 24	21 34	02 13 W			
4400 v	Comp							ThAr	4sec
4401 v	Comp							"	"
4402 v	HD 47105	06 31.9	+16 29	21 44	22 26	01 44 W			
4403 v	Comp							ThAr	4sec
4404 v	Comp							"	"
4405 v	HD 62509	07 39.2	+28 16	22 34 30	22 45 30	00 57 W			
4406 v	Comp							ThAr	4sec
4407	BIAS(4)					01 W	+28°		
4408	Comp for	HD87901						ThAr	4sec

Spectr. Temp. ..... Dome Temp./Hum. 0°C 80% Transparency Conditions ... PART Cloudy-hazy...

Focus .. 1.225 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... control d

CFDT -> -100°C

CCD FMT

30CG4in 0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	.2850 600l/mm	60u width 600u Height + H2			60u = .277 sec 600u = .205	default slits 176.708 T 0.874	
										DRA@ 03 hrE=+00 00 03 OK	
2500	2"	V 1.36	B7V					4ci	some cloud Telluric Std	should be +00 04 00 30 encoder Δdec -00 09 27	
									* 3700 A to 4/Pixel max		
6460	2"	V 0.08	G6III + G2III					3ci	KK pgm	= 10K ADU max/pixel Capella some cloud	
5575	2"-4"	B 1.9	V=1.93 A0IV					5ci	KK pgm	8 Gem 8600 max ADU	
3000	2"	B 2.15	K0III b					6ci	Stdlel	Beta Gem Cond. Tend	
										Dome T = -1.6°C	

267

Pg #2 Sun/Mon

Date 1992 Feb 23/24. Observers ..KK./.Th.I.MKi.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04409	HD 87901	10 03 03	+12 27	23 07 40	23 30 00	00 42E			
4410	Comp							ThAr	4sec
4411 → 4413	FLATS (6) x 3	USING FLATS 6,10,5 Average of 6		23 40		0 0	+30°	TUNG	~~2sec~~ 1sec
4414 4416	"		"			"	"	TUNG	1sec
4417	BIAS(4)					0 0	+62		
4419	HD 95689	10 57.6	+62 17	01 14	01 35	00 27W	ce04418 ce04420	ThAr	4sec
4421	HD 95089	"	"	01 39	01 55	00 47W	ce04422	"	"
4423	Comp at Nova Cyg 92 pos 2000 each			02 06		08 28E	+52 31	ThAr	4sec
4424	NOVA Cyg 92	20 30 32	+52 37 53	02 25	02 50	07 44E	~~ce04425~~	— " —	"
4425	"	"	"	02 50 30 (1200sec)	03 10 30	E			
4426	Comp			(1380sec)				ThAr	4sec
4427	Nova Cyg 92			03 14	03 37	06 57E			
4428	Nova Cyg 92			03 38	04 00				
4429	Comp							ThAr	4sec
4430	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. ~1.7°C 83% Transparency Conditions . PART = mostly V. cloudy...

Focus ... 2.25 ... no filter ...

Spectr. Temp. ..... Dome Temp./Hum. ..... Clearing a bit by 01 EST

268

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
860	2"	V 1.36	B7V	Echelle CCD	.2850 600/mm	60u 600u	Hα	7ci	Telluric Std	1700 ADU MAX thin cloud + th. cirrus)	
1sec using 100 t scale					BUT	60u width 800u Length for Flats				MAX ADU/pixel = 7200-7400	
"	"	"		Note. using FLAT 9.20S saturated.						See previous night. 7500 MAX	
										Pano T = -2.2°	
6000	<2"	V comb 1.79	KoIIIa			60u width 600u	Hα	3ci	KH pgm	Delta δ = -60 07 18 Delta RA = +18 sec MAX-10000 counts	
4300	2"	"	"					~~5~~	α UMa AB		
								~~5~~	Nova visible in Finder OK		
45	3-4			(very Broad Em) (1200 ADU MAX @ Hα)			Hα	6ci	Nova 92 pgm	using wide slit from setup hazy V fan on slit	
58	"							7ci		Field Crown Field checks Right on	
256	2	V 4.5	Fainter than SCyg					4ci	iV image OK	3K ADU MAX Hα now dispute lock base	
320								5ci			
								1ci		Dome T = -4.6°C	

269 pg #3

Emulsion Batches:

Date 1992 Feb 23/24 Observers MH / TH

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04431	Nova Cyg 92			040430	043000	0604E			
4432	"			043100	045100	0543E			
4433	Comp							TH A	45s
4434	Comp							"	45s
4435	HDL 77724	19 0049	+13 4253	0459	0519	0346E			
4436	Comp							TH A	45s
4437	BIAS (4)								
	Echelle focus test next night Feb 24/25								
ce04438	Focus Test	In board		22 EST		0 0	+30°	TH A	4s
4439	" "	Out board,				"	"	"	4s

Spectr. Tem
Focus ...
Spectr. Tem

Exp Mtr.
408
450
740
T=

Spectr. Temp. ..... Dome Temp./Hum. -4.6°C 61% Transparency Conditions ..Part. Cloudy.....

Focus ...225.....

Spectr. Temp. ..... Dome Temp./Hum. -5.1°C 60%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
408	3"	2.45		Echello CCD	600 l/mm	60μ 600 Length	Hα	7c;	Nova Cyg 92 pgm	Clear now	
150								~~8~~ 7 Acq		Cloud now	
540	3-4"	2.99	AOV n					6c;	Telluric Std	Thin cloud V sin i = 331 km/sec	
										Roto T = -5.2°C	
				All to Perseus and worm,					TM		
T = -1.6°C		Still set at .225				60μ 600 Length		8c;	200.0 64 1024 S 1 cc OFMT		
							Hα	9c;		shift of Outbound Rad. Vel.	
				Hα ORDER	6535Å ⇒		6584Å				
							6483Å		next ORDER blue of Hα	65 Å rotat 94-96 pts	
					(6386 Blend)		6410Å		next ORDER Hβ	48-60 pts, 6933 Å blend	
							6338			Top ORDER not full	

271 Thurs–Fri

Date 1992 Feb 27/28 Observers [Blu]/Tin/Fle

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO5819.fts	BIAS(4)								
5821	HD 36485	05 26 54	−00 21 30	19 10	19 40	00 19 W	CCO5820 CCO5822	FeAr Clear	90sec
5823 5826	BIAS(4) Change			19 56		W			
5824 5832	FLATS x 9			20 05		00 18W	−00° 21	TUNG A=1/2	7sec
CCO5833 5834	Focus Test	Comp/stellar		Hartmann	20 20	"	"	FeAr	60/45
CCO5836	HD 36485	05 26 54	−00 21 30	20 47	21 47	02 27 W	CCO5835 CCO5837	"	90sec
5838	BIAS(4)			21 51		"	−00 21		
5840	HD 35502	05 20 00	−2 54 22	22 10	22 42	3 28 58 W	CCO5839 CCO5841	FeAr Clear	90sec
5843	HD 87901	10 03 03	+12 27	22 53	23 03	−0 53 00 E	CCO5842 CCO5844	"	"

Spectr. Temp. ..... Dome Temp./Hum. -1.6°C 64% Transparency Conditions .. PART cloudy - snow 272
Focus .... ~~7.20~~ 7.00 actually Str NW wind
Spectr. Temp. ..... Dome Temp./Hum. ..... CONTROL CCDT = -100°C 90 GAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	G=6050 1800/	200μ Full Length	6600Å center Hα		480 0 60	1024 4 1 CCDFMT	
4100	6"	V 6.85	B2V$_{sm}$	(He Str)				4ci	Hα pgm Bkn	snow & cloud & end	
	Note (Had to Reset Heuricon before this Bias)									Dome T = -1.4°C	
								3ci 10ci		9K mux ADU	
	T=	-1.6°C	set 7.00			200μ Full Length	6600Å center Hα	11ci 12ci		stellar spiral Ra & Hα	
8500	4-6"	V 6.85	B2V$_{sm}$			200μ width Full Length		6ci	Hα pgm Bkn	more cloud & end	
					$\bar{x}$ = 126.103		σ = 1.272			Dome T = -4.3°C	
1140								7ci			
11961	6"	V 1.36	B7V						Telluric Std	3 sec MAX ADU in cloud	

273 Copy #1 Fri - SAT

Date . 1992 . Feb 29 ~~MAR~~ Observers . [illegible] / [illegible] / [illegible] .....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05844									
CC05845	Focus Test	Comp /	Stellar Hyp	TMAX pos's	2333		CC05846	FeAr Clear	60/45
CC05847	HD87901	10 03 03	12 27 00	0025	0026	034W			
CC05848	HD87901	10 03 03	122700	0031	0033	0 40 49W			
CC05849	Comp							FeAr Clear	180 sec
CC05850	Bias (4)					044W	+1227		
FM:00424 For 5851	HD90861	10 24 17	29 05 35	0102		0053W	+28 38	4 frames	
5851	Comp							FeAr Clear	180 sec
5852	HD90861	102417	+290535	0116	0139	0129W			
5853	Comp							FeAr Clear	140 sec
5854	Comp							"	"
5855	HD95689	10 57.6	+62 1700	0158	0200	0117W			
5856	Comp							FeAr Clear	180 sec
5857	BIAS (4)								
5858	Comp FeAr						Clear CC05859 FeNe 4 secs	~~FeNe~~	180 sec
5860	Nova Cyg 92	Epoch 2000 20 30 32	52 37 53	02 25 30	02 31 00	0739E			5 mins
					02 31 00				

Spectr. Temp. ..... Dome Temp./Hum. −5°C 52% Transparency Conditions Clearing 274

Focus 7.00 −8°C By OEST

Spectr. Temp. ..... Dome Temp./Hum. .....

CCDT − −100°C

30CGAIN 480 0 50 1024 41 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
T = −5°C		Set 7.00		CASS CCD	G=6000 1800/ 55.8	200μ Full Length	6545Å actual Hα				
19350		V 1.36	B7V						TELLURIC STD	DOME T: −8.6°C ~ 6000 ADU MAX	
50,350		"	"						TELLURIC STD	(STRONGER SPEC.)	
				stars	$\bar{X}$ = 161.284	σ 1.054				DOME T: −9.5°C	
"N" mode	V POOR 67 msecs			Int (1/15 sec) LARGE BOX		200 arc slit Full Length			seeing test	STR N WIND DOME SW	
3500	5-8"	V 6.9	K2 III				6545Å	7ci	stdvel	DOME T: −10.5°C	
29,000		V 1.79	K0 IIIa					10ci	kk pgm	MAX 41000 ADU	
2300	10"							1ci	Nova Cyg 92	3500 ADU MAX	

275 pg#2

Date 1992 Feb 28/~~MAR~~ 29 Observers T. h. f. F. bs

Emulsion Batches:

Plate No.	Object	R.A. 1900 (2000 epoch)	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC05861	Nova Cyg 92	20 30 32	+52 37 53	02 33 30	02 48 30	07 22 E			
5862	Nova Cyg 92			02 50 30	03 00 30				
5863	Nova Cyg 92			03 02 00	03 12 00	06 58 E			
5864	Nova Cyg 92			03 14 00	03 24 00				
5865	Comp						Fe Ar Clear		180 sec
5866	Comp						"		180 sec
5867	HD 177724	19 00 49	+13 42 53	03 37	03 46	4 59 E			
5868	Comp						Fe Ar Clear		180 sec
5869	BIAS (4)					04 49 E	+14°		
5870	Comp							Fe Ar	180 sec
5871	Nova Cyg 92	20 30 32	52 37 53	04 06	04 16	05 54 E			
5872	Nova Cyg 92	20 30 32	52 37 53	04 18	04 28	05 41 E			
5873	Nova Cyg 92	20 30 32	52 37 53	04 29	04 39	05 30 E			
5874	Nova Cyg 92	20 30 32	52 37 53	04 40	04 50	05 20 E			
5875	Nova Cyg 92	20 30 32	52 37 53	04 51	05 01	05 10 E			
5876	Comp							Fe Ar	180 sec

Spectr. Temp. ..... Dome Temp./Hum. -12.5°C .52% Transparency Conditions ... Fine 276

Focus ..... 7.00 ..... prob. Ideal for -10°C

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6800	10"			CASS CCD	G=6000 1800/558	900μ FULL	6545B	9ci	Nova pgm		
5280								10ci			
5870								11ci		2.3775 AIRMASS @ 0306 EST	
5670	6"							12ci		Brighter Than Finder Field Star ~~at~~ at SSE edge of Field, But not by much	
										2e1460 AIRMASS @ 0330	
71,600	6"	V 2.99	AOV n					14ci	Telluric Std	3.1800 @ 0330	
										Dome T = -12.6°C	
6300	8"							15ci	Nova pgm	Air Mass = 1.85	
6800								16ci	— " —	Dome T = -13.7°C	
6900								17ci	— " —	Dome T = -14.0°C	
6700								18ci	— " —		
6575								19ci	— " —	Dome T = -14.4°C.	

277

pg#3

Date . 1992 . Feb 28/~~MAR~~ 29 | Observers . . T.A. . / . F.B.T. . . . . .

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05877	Comp							FeAr clear	180s
5878	HD 199579	20 53 27	+40 46 55	05 12 20	05 32 20	05 04 E			
5879	Comp							FeAr clear	180s
5880	Comp							FeAr clear	180s
5881	Nova Cyg 92	20 ~~30~~ 32	52 37 53 ~~40 46 55~~	05 45	0555	E			
5882	Nova Cyg 92	20 30 32	52 37 53	05 56 30	06 06	04 04 E			
5883	Comp							FeAr clear	180s
5884	Bias (4)								
5885 5893	FLATS x9			06 18		03 50 E	+53°	Tung A=1/2	12s
5894 5945	Focus Test	Comp / stellar posn				03 40 E	+53°	FeAr clear	60/45

Spectr. Temp. ..... Dome Temp./Hum. -14.8°C 55% Transparency Conditions ... Fine but cold .....

Focus .... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. -15.8 52%

no Aurora Tonight as Skelton had predicted

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6000	200μ	6545Å			Emission within Hα	
37,000	8"	✓ 3.94	A1 V_n					20ci	TELLURIC STD	∠ 3100 MAX ADU 1.83 AIR MASS	
6600									Nova pgm	DOME T = -15.6°C	
5400									"		
										PRIMO T = -15.7°C	
								24ci -32ci		MAX 10K ADU	
	Still @ 7.00 T = -15.8°C							33 34 35 36	Focus test	stellar FWHM 2.5 pixels	
					111 ℓc		PERSEUS 4m		4CRM		

Emulsion Batches:

Date 1992 ~~MAR~~ FEB 29 Observers Bln./.Fbr./.Tm.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
5896	BIAS (4)								
5897 5898	Focus Test	Comp / Stellar Posn			19 40	0 31W	-2 44	FeAr Clear	60/45
5899	Comp							FeAr Clear	90sec
cc5900	HD 35507	05 2000	-02 5422	20 0030	20 2730	1 22W			
5901	Comp							FeAr Clear	90sec
5902	BIAS(4)			20 41		01 35W			
5903 5911	FLAT (x9)							Tn A=1/2	7sec

Spectr. Temp. ..... Dome Temp./Hum. -9.2°C : 61% Transparency Conditions ... Partly Clear .....

Focus .... 7.00 ⇒ Reset to 6.85 after Focus test

Spectr. Temp. Stellar Comp. vs. Blue for 6.85 set (OK) Dome Temp./Hum. 480 0 50 1024 4 1 90CCGain

FORMAT Completely Cloudy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 6050 1800	200u Full Length		1 2			
	Temp = -8.9°C			Set 7.00			G=6050 ~~6495~~ Ref of Hα	3Sci 3Cci ~~3Ci~~	Focus ccofmt	stellar shift 1 pixel Red CCD FmT 360 0 10 1024 40 1	
2230	2-4"	V 7.36	B5IV sh	(HeW)				3Ci 4Ci	Bln pgm	clouding in	
					All to Persons		NORM.			Dome T = -9.3°C	
										Dome T: -9.0°C	

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Tues / Wed

Date 1992 MAR 3/4 .... Observers K.K. / T.M. / Shen .....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT 0898	Comp							FeNe/	200
899	Comp							FeA/	200
900	comp							TiNe	200
901	flat							W	200
902	comp							FeA/BG39	200
903	comp							FeNe/BG39	600
TAGS FIT 904 FIT00905.fts	Flat HD34029	05 09 18	+45 54 00	18 29 50	18 59 50	00 14 W	+45 49	BG39 Filter	120
TAGS FIT 906	"	"	"	19 00 15	19 30 15	00 44 W		"	
907	Comp	"	"	19 42		Diffuser OUT	Fe ive clear	BG39 filter	10 min
908	FLAT	"	"	19 59	20 18	Diffuser OUT	TUNG Clear	"	
TAGS FIT 909	HD62509	07 39 12	+28 16 00	19 26 45	20 56 50	00 17 E		BG39 In	
FIT00910	Comp (Last of Speckle OBS)			21 01			Fe Ne Clear	BG39 In	10 min
CCD5912	BIAS (4)								
5914	MMC 560	07 21 03	-07 32 12	21 35	22 05	01 11 W	CCD5913 ~~CCD5915~~	Rear Clear	90 sec
5915	"	"	"	22 06 30	22 36 30	01 42 W			
5916	Comp			Note	Diffuser still OUT			Rear Clear	90 sec

Spectr. Temp. ..... Dome Temp./Hum. 0°C 52% Transparency Conditions ... Thin cloud - OK 282

Focus ... FOR CASS 6.85

Spectr. Temp. ..... Dome Temp./Hum. ..... FOR Speckle Fiber Feed using OLD "X" Collimator

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				X coll. fiber fed	1200/48	8.5μ fiber					
					831/45						
					831B/45						
CHA 1500/4000	OK	B 0.89	G8III? + F	FF Speckle	#831/45°	8.5μ fiber	4250Å		KK speckle pgm Cygalla	#834B grating "OldG12" Image s/ out of focus, rings	
1200/3500 CHA									"		
10-26mB											
150-210											
400-600									KK pgm as a Std part cloudy		
				30 CG Min	(T= -100°C FOR CCD) G=6000	200μ	6545Å		$\bar{x}$ = 1.65 ADC	Demo T = -2°C	
328	2"			CASS CCD	1830	Full Length		3ci	KKi pgm	480 0 50 1024 4 1 CCD FOMT	
325	2"			"	"	"	"	4ci	"	fairly cloudy	
				"	"	"	"	5ci		292 104 Top Scale ##	

283 pg #2 Tues/Wed

Date 1992 MAR 3/4 .... Observers [Mtki] ... T.H. .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC05917	Comp	This Time with Diffuser IN						FeAr Clear	180sec
5918	MWC 560	07 21 03	-07 32 12	22 46 30	22 59 30	02 05 W			
5919	Comp					Diff IN		FeAr Clear	180sec
5920	BIAS(4)					02 10W			
5921 -> 5926	FLATS x6					02 15W	-7 54	TUNG A=1/2	12sec
5927	Comp							FeAr Clear	180sec
5928	HD87901	10 03 03	+12 27	23 31	23 33	00 10W			
5929	Comp							FeAr Clear	180sec
5930	Comp						Dec Circle	"	"
5931	HD25642	03 59 08	+50° 04 48	00 03	00 23	6 48W	+50° 17'		
5932	Comp							FeAr Clear	180sec
5933	BIAS(4)					6 55W	+50 17		
5934	Comp							FeAr Clear	180s
5935	HD77372	08 56 48	+47 33 03	00 57 30	01 03 30	2 32 W	Dec Circle +47 13		
5936	Comp							FeAr Clear	180

Spectr. Temp. ..... Dome Temp./Hum. -2.7°C 62% Transparency Conditions .. P.C.A.T. cloudy .....

Focus .. 6:85 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6000 1800/	200u Full	6545Å		386 Top scale #	CGAin = 30	
	2"-3"							5ci	Mki pgm	cloud at end clear partly again	
~~star temp~~ = ~~to 616~~								6ci			
17										Dome T = -2.8°C	
								6ci		MAX 10K ADU/pixel	
74000	OK	V 1.36	B7 V					6ci	Telluric Std	guided a bit 52000ADU MAX	
								~~6ci~~			
54300	3"	V 4.29	A0 V n	Note Like for HD194629	AHa Bln This is another "ODD" Hot probe			7ci	Telluric Std (Bln) guided a bit too much by accident	Tel East side of Piers - encoders Failed 44000ADU MAX	
									x.2 164 ADU	Dome T = -3.3°C	
										Topup @ 00 40	
62000	2"	V 3.60	A1 V n					8ci	Telluric Std (Bln)	52000ADU MAX	

285 pg#3

Date 1992 MAR 31/4 Observers [illegible] Typhoon ... T.M.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cco5937	~~Comp~~ BIAS(4)					02 38W	+47 13		
5938	Comp for Nova							Fe Ar Clear	180 sec
5939	NOVA Cyg 92	20 30 32	+52 37 53 (2000 epoch)	01 21 20	01 33 20	0825E			
5940	"	"	"	01 35 00	01 42 00	E			
5941	"			01 44	01 52				
5942	"			01 55 30	02 04 30				
5943	Comp							Fe Ar Clear	180 sec
5944	BIAS(4)								
5945	NOVA Cyg 92	20 27 43	+52 17 39 (1900 precessed from 1950 coords)	02 12 30	02 20 30	E			
5946	"			02 23	02 30				
5947	"			02 39	02 47				
5948	"			02 43 30	02 44 30				1 min
5949	"			02 46 40	02 47 40				1 min
5950	"			02 50 00	02 51 00				1 min
5951	Comp							Fe Ar Clear	180 sec

Spectr. Temp. ..... Dome Temp./Hum. -3.3°C 65% Transparency Conditions ... O/C ... 286

Focus ... 6:85 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

30 CGAIN still CCDT = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6000 1800	200μ Full	6545Å				
4200	4"	V* =5:5						9ci	Nova pgm	* Looks st brighter than 2 Field stars in Finder. AIRMASS = 3.66 15K 40K MAX (Almost saturated)	
2460								12ci	"	AIRMASS = 3.3	
3200								~~12ci~~	"		
								13ci	"	AIRMASS 3.0 10K 12K 4x ADU	
										Dome T = -3.9°C	
4370								16ci		guided a bit dome started	
3700								18ci			
1750								24ci		guided	
630								25ci			
640								26ci			
740								27ci			

287 pg #4

Emulsion Batches:

Date 1992 MAR 3/4 Observers [ork.] T.H

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc05452	Comp							FeAr Clear	180sec
5953	HD 199629	20 53 27	+40 46 55	03 08 30	03 12 30	7 03 E			
5954	Comp							FeAr Clear	180sec
5955 5960	FLATS x6				03 32	6 50 E	+41°	TUNG A=1/2	12sec
5961	BIAS (4)					"	"		
5962	Comp							FeAr Clear	180s
5963	HD144579	16 01 30	+39 25 36	03 41 45	03 47 45	01 44 E			6min
5964	Comp							FeAr Clear	180sec
5965 5966	Focus	Comp/stellar HurTman 1900			04	01 38 E	+39°	FeAr Clear	60/45
5967	Comp							"	180s
5968	Nova Cyg 92	20 27 43	+52 17 39	04 06	04 08	E			
5969	"			04 09	04 11	5 47 E			
5970	"			04 12	04 14				
5971	Comp							FeAr Clear	180sec
5972	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -4°C 62% Transparency Conditions ... Fine .....

Focus ... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. -4.3°C ... 61% Nova Cyg est @ MAG visual ≈ 5.5 by Tn 03 EST. and 5.5 also @ 4:30 EST previous morning

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3						6545A			I guess no good as a Tel Std	
23,000	2"	V 3.94	A/Tn					28c;	(Bln) Telluric Std	AIRMASS 3.60	
								~~29~~ 31		10K MAX	
										Dome T = -3.9°C	
								~~34c.~~			
4000	1-2"	V 6.66	G8V					29c;	Std Vel		
										Right on in focus	
	Set = 6.85		T =	-4°C				33 34c.	Focus Test	FORMAT 360 0 10 1024 40 1	
								~~32c;~~			
2140								30c;	Nova pym		
2340								31c;			
2845	1"							32c;			
						All to Perseus : WORK					

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pg #1 Wed / Thurs.

Date 1992 March 4/5 Observers KK/Jn/sc/[illegible]/Th

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
FIT 00911	FeNe (aux feed)						Filter BG39	CuNe FeNe	600	350
912	Tungsten						"			700
913	HD 34029	5 09 18	+45 54	17 59 19					1800sec	2400
914	"	"	"	18:34:20					"	2400
915	"	"	"	19:06 25	19 36 25	00 55W	Diffuser OUT		"	2400
916	FeNe (comp)						BG39	Reg FeNe	600sec	
CCD5973.fts	BIAS (4)									
5974	Comp						Diffuser IN	Fe Ar Clear	180sec	
5975	MWC 560	07 21 03	-07 32 12	20 14	20 44	00 07 E W				435
5976	comp							Fe Ar Clear	180sec	
5977	FLAT 100 Hz							TUNG H-Va	12sec	
5978	FLAT for H beta							Tung Clear	40sec	
5979	Comp							Fe Ar Clear	80sec	
5980	MWC 560	07 21 03	-07 32 12	20 56	21 26	0039W				417

Spectr. Temp. ..... Dome Temp./Hum. +1.2°C / 74% Transparency Conditions V. clear 290

Focus ..... 6.85 for Cass .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
550		B 0.89	[illegible]	fiber fed X collimator	831 B/ 45°	8.5μ fiber	PCS			seeing good, mirror bad	
1700											
2400	2"?	B 0.89	G8III +F2							Capella	11.0 Mb
2400										obscured by dome 1000 - [illegible]	11.7 Mb
2400											10.8 Mb
	FITS q log copied to N:\Speckle Reasons.								CCDT -7 -100° 480 0 50 1024 4 1 CCDTemp		
	Focus 6.85 seems OK @ 0°C (comp 2 pixels wide FWHM)									30 GGAin	
				CASS CCD	1800 G6000 CASS CCD	200u Full	H2 Region 6545Å				
425	2"							4c;	177K; Pgm	Thorium on or when turning Dome during exp - Heater switch was set on.	
								5c.		8K MAX	
					G 4760 1800/		G=4760 H Beta	6c.		8K MAX	
							Central ~ 4825Å				
447	2"						H Beta	~~5c~~	177K; Pgm		

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Iafed Thurs.

Emulsion Batches:

Date 1992 MAR 4/5 Observers [mki] Jn./S.C.

using CCD3 starting This page

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCO5981	MUC 560	07 21 03	-07 37 12	21 35 30	22 00 00	01 09 W			
CCO5982	Comp FA			22 04 39					
5983 – 5985	~~BIAS~~ FLATS x3						Diffuser IN	TUNG Clear	40s
5986	BIAS(4)	using SCs BIAS 4.BAT in CCD3							
5987 5988	FOCUS - COMP PO - CCO 5990					01 40 W	-7°40	FeAr Clear	30/30
FIT00917	Tungsten – dead Time test							BG39 +ND0.6	720s
918	"							BG39	72m
919	"							BG39 +ND0.6	
CCO5989	Focus Test	Comp posn	MAR 12/13			00 07 W	+22°	FeAr Clear	60s
CCO5990	" "	Stellar posn			20 08			"	"

Spectr. Temp. ..... Dome Temp./Hum. 0°C 70% Transparency Conditions ... some Cloud in SW 292

Focus ... 685 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 30C GAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3"			CASS CCD	G=4760 1800	200u FULL	4825Å	9c:	MKI pgm	cloud at end	
										7K max	
										Dome T = 0°C	
		Set 6.58	T=0°C				4825Å	33 34	Focus Test	Right on	
670						All CCD	OBS		to WORMS for seeing		
2000											
4650											
Set 685	T=-7.0°C			CASS CCD	G=5930 1800l	200u Full	6450Å	33c:	stellar UVSJ blue ~ 2 pixels		
								34c:		some 2.2 pixels Full = 3 pixels +	

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Thurs - Fri

Date . Mar. 12/13.-92.... Observers ..[Blitz Tn/Fbr..... using CCD3

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC05991 5992	Focus Test	Comp	/Stellar	02 26		06 55E	+52 35	FeAr Clear	50/50
CC05993	BIAS(4)								
05994	Comp	1900 precessed						F	
CC05995	Nova Cyg 92	20 27 43	52 17 39	02 37	0242	06 41E	+52 35		
CC05996	Nova Cyg92	20 27 43	52 17 39	02 49	0301	06 22 E	+52 35		
CC05997	Nova Cyg92	20 27 43	52 17 39	03 04	03 16				
5998	Comp (using ccon + 90)							FeAr Clear	90sec
5999	Nova Cyg92			03 2445	03 3645				
~~6000~~	~~"~~	~~(expose 600)~~		~~03 38 30~~	0352	0531 E	~~+52 35~~		
6000	BIAS (4)	Header says its BIAS(4), but 600 sec exp?						June 96/Tn	
6001	Nova Cyg92	20 27 43	52 17 39	0409	0419				
6002	Comp							FeAr CLEAR	90s
6003	Comp							"	"
6004	HD177724	19 00 49	+13 43	04 36	04 56	0300E			
6005	Comp								

Spectr. Temp. ..... Dome Temp./Hum. -10.7°C/.62% Transparency Conditions ....Clearing...some...cirrus 214

Focus ...6.85.....

Spectr. Temp. ..... Dome Temp./Hum. ..... central *30 C GAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	a=6000 1800/[redacted]	300u Full Length	6545Å	33ci 34ci	Focus Test	360 0 10 10 24 40 1 CCD FAST	
										480 0 50 10 24 4 1 CCD FAST	
								4ci			
1195	8"							5ci	Nova Pam.	Dome T = -11.4°C	
2900	8"							6ci	Nova Pam.	Dome T = -11.7°C	
2700	6"							6ci	Nova Pam.	Dome T = -12°C	
								7ci			
3800								8ci			
3155								9ci			
										using (expose 600)	
22000								9ci	Nova Pam	Dome T = -12.8°C.	
								11ci			
53600	4"	2.99 V	AOV1					10ci	Telluric Std	Airmass 1.50	
								12ci			

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Pg #2

Date MAR 12/13 /92 Observers [Blz] Fbr Ttz

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 06006	BIAS (4)								[illegible]
6007 6005	FLATS x 9								

Spectr. Temp. ..... Dome Temp./Hum. ~13°C 62% Transparency Conditions Cloudy in

Focus 6.85

Spectr. Temp. ..... Dome Temp./Hum. .....

30CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6000	300μ	6545Å			~~10K ADU MAX~~	
										10K ADU MAX	

297

pg # 1

Date MAR. 15/16/92.... Observers [KH]....TN.....Bhrm

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04440fs	BIAS(4)			21 30			RG610 Filter pressure IN place		
ce04441fs	Comp						Filter slide IN again	Th Ar	2sec
ce04442fs	HD 34029	05 09 18	+45 54	21 51 30	21 53 00	3 55 00 W			
4443	Comp							Th Ar	2sec
4445	HD 47105	06 31.9	+16 29	22 11	22 31	3 12 W	ce04444 ce04446	Th Ar	2sec
4447	"	"	"	22 38 30	23 09 30	3 51 W	ce04448	"	2sec
4449	BIAS(4)	[Note June 96 TN header says 20:40:05 EST, 5 sec exp, comp in type]							
4450	Comp							Th A	2sec
4451	HD 87901	10 0303	+12 27	23 56 00	00 11 00	01 22 W			
4452	Comp							Th A	2sec
4453	Comp							"	"
4454	HD 62509	07 39 12	+28 16 00	00 20 30	00 25 30	03 59 11 W			
4455	Comp							Th A	2sec
4456	Comp							Th A	1sec
4457	HD 137909	15 23 42	+29 27 00	00 40 45	01 19 45	2 49 E			
4458	Comp							Th A	1sec

Spectr. Temp. ..... Dome Temp./Hum. -11.°C ... 60% Transparency Conditions ... Sl. hazy .....

Focus ... ~~.240~~ .190 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

CCOT → -100C CCOFMT

30 CGAin 0025610244 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	7600 Å X = 1565	60μ = .275 L=600μ Hα center length 600μ = .205 set		Echelle T. lt=190		-11.5°C Dome T	
~~21,400~~ ~~7,700~~		B 0.89	G8 III + F?					~~1sec~~	Asm Sp-KK	Saturated at 4000 cnts	
1400	3"	B 1.9	A0 V					~~3sec~~	Asm Sp-KK	5800 ADU max	
1700		"	"					6ci	"	6900 ADU MAX	
										Dome T = -12°C	
1450	3"	V 1.36	B7 V					~~5sec~~	Telluric Std	7000 MAX ADU A.M. MASS = 1.19 Approx 10° from 3/4 moon	
940	3"	V 1.14	K0 III A					~~4ci~~	Std vel	4000 ADU MAX	
370	2-3	V 3.66	F0p					5ci	Asm Sp KK	2500 ADU MAX	

299 Pg #2

Emulsion Batches: .....

Date 1992 MAR 15/16 Observers [KK] / Th / Bhm .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4459	BIAS(4)			01 25 00					
4460	COMP							Th A	1 sec
4461	Nova Cyg 92	20 27 43	+52 17 39	01 45 00	02 17	06 54E			
4462	"	"	"	02 20 30	02 43				
4463	Comp							Th A	1sec
4464	Nova Cyg 92	20 27 43	+52 17 39	02 50 20	03 06 20	06 04 E			
4465	Comp							Th A	1sec
4466	BIAS(4)								
4467	75 ~~Comp~~ FLATS x 9				03 42	02 05 W	+13 43	TUNG	7sec
	~~HA~~								

Spectr. Tem
Focus .....
Spectr. Tem

Mtr.
0
0
0

Spectr. Temp. ..... Dome Temp./Hum. −12.0°C : 57.5% Transparency Conditions ... sl. hazy 300

Focus ..... ~~.175~~ .190 ....

Spectr. Temp. ..... Dome Temp./Hum. .....

* Panasonic with no Im Int used all night

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD		600μ Length = .205 60μ Width Hd				xgrating 7600Å @ 0.565	
0	2"-3"	* ~7??						~~7ci~~	NovaCyg92	* MAX Hα 2100 ADU Image barely visible	
0								5ci	Hi-RMASS @ 0227 = 2.14	V mag ≈ midway between 2 other Finder Field star at south of Field.	
0	2"							7ci			
										Dome T = −12°C	
						Length set to .190 60μ width		4ci		11K MAX 404	
					All to warm ; Perseus,						
		Note	I couldn't edit		image type of CCD 4440 ~~from~~ "Comp" to "Zero" with EEDFITS.						
		Also, some comp "OBJECT" are of the associated star, since I imported pos'n. The image types are "Comp" however.									

301

Mon - Tues

Date 1992 MAR 16/17... Observers [KK]...Fbr./Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CEO 4476 4477	Focus Test		Set. 200	T = -3°C	19 30	03 W	RG610 F: Med 112 +24 Div	ThAr	2/2
~~CEO 4478~~	~~BIAS(4)~~					"	"		
~~4479~~	~~Comp for~~	~~HD 34029~~						ThAr	
~~4480~~	~~HD 34029~~								
CEO 4478 4479	Focus Test	INBOARD OUTBOARD	MAR 17/18/92		19 46			ThAr	1/1 sec
CEO 4480 4481	Focus Test	Inboard OUTBOARD	MAR 17/18/92		21 50			ThAr	1/1

Spectr. Temp. ..... Dome Temp./Hum. -3°C ... 53% Transparency Conditions PART ... MOSTLY Cloudy.

Focus ..190 -> .200 ..... NO Observing.

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 CGAin T -> -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200	0	64 1024 8		Echelle CCD FmT	7600Å Height	60µ .190	Hα		Focus Test	OUT BOARD ~.7 pixel Red FOR .190 setting ~~.2 pixel Red~~ OUT BOARD .2 pixel Red for .200 setting	
~~0~~	~~0~~	~~256~~	~~1024~~	~~1 CCD FmT~~							
								X Grating changed to .5665		6707Å is 3rd order from B Hour	
T=0°C		Set .200		Echelle CCD	X grating 7600Å Tilt=.5665	60µ ~~.190~~	6560Å Hα	Echelle Tilt=198 Slit H=.205=600µ		OUT BOARD .5 pixel Red	
T=-1°C		Set .200		Echelle CCD	7600Å X .476	60µ width ~~H~~ (Height) =.205=600µ	8800Å	300 0 64 1024 81 CCD FmT Echelle Tilt=18.70		OUT BOARD rust Red shifted	

303 pg#1 Tues Wed.

Date 1.1992 MAR 17/18. Observers [KH] Fkr. / Tn.

Emulsion Batches:

R.G. 610 Filter All night

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04482	BIAS(4) using <<Bias4.BAT			22 08		≈ 03 W	≈ +20°		
4483	Comp							ThAr	1 sec
4484	HD 34029	05 0918	+45 54	22 54	22 56	05 06 W			
4485	Comp							ThAr	1sec
4486	HD 34029	05 0918	+45 54	23 06		W			
4487	Comp								
4488	Comp		Lost	not written				ThAr	1sec
4489	HD47105	06 31 54	+16 29	23 16	23 31	4 20 W			
4490	Comp							ThAr	1sec
4491	Comp			[illegible]					
4492	HD87901	100303	12 2700	2342	23 53	01 12 W			
4493	Comp							ThAr	1sec
4494	BIAS(4)								
4495	Comp							ThAr	1sec
4496	HD8890	01 2236	+88 46	00 20	00 33	9 50 W			
4497	Comp							ThAr	1sec

Spectr. Temp. ..... Dome Temp./Hum. -2°C 59% Transparency Conditions Mostly cloudy & some [illegible] 304

Focus ...200.....

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 CGAin 0 0 256 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	7600Å .5665	60μ 600 H.e.	6560Å				
								3c;			
1400	2"	B 0.89	G8 IV +F?					~~Ac~~	Asm Sp KK	MAX ADU → 15000	
1000								~~Ec~~	Asm Sp KK	MAX ADU = 8000	
900	<2"	B 1.09	A0 IV					~~5c~~	Asm Sp-KK		
1000	2"	V 1.36	B7 V					~~Ec~~	TELLURIC STD	AIR MASS 1.22 DOME T = -3.9°C MAX	
										T = -4.4°C	
1300	2"	V 2.0	A or F					~~3c~~	Asm Sp KK	5200 ADU MAX	

305

pg #2 Tues wed

Date 1992 MAR 17/18 ... Observers [KK] ... Th / Fk / SC ...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04498	HD8890	01 22.6	+88 46	00 37	00 53	10 10 W			
4499	Comp							ThAr	1sec
4500	Comp							ThAr	1sec
4501	Nova Cyg 92	20 27 43	+52 17 39	01 10	01 44	7 19 E			
4502	Comp							ThAr	1sec
4503	Nova Cyg 92	20 27 43	+52 17 39	01 50	02 10				
4504	Comp							ThAr	1sec
4505	BIAS (A)	Then Topup @ 2 30							
4506	Comp							ThAr	1sec
4507	HD 17724	19 00 49	13 43 00	02 51	03 31	4 06 E			
4508	Comp							ThAr	1sec
4509	Comp							ThAr	1sec
* 4510	HD 137909	15 23 42	+29 27	03 39	04 09	0 08 W			
4511	BIAS (A) ~~Comp~~ for ~~Nova Cyg~~ 92	After Reset of Heuricon Camera controller						ThAr	1sec
4512	Comp of Nova Cyg 92			no go	(Cloud)				

Spectr. Temp. ..... Dome Temp./Hum. -4.6°C 59% Transparency Conditions ..... Fine ..... Haze 306

Focus ..... 200 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

0417 P.27a

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1300	2"	2	A	Echelle CCD	7600 Å 1st 42nd 60μ X tilt = .5665	60μ	Hα	~~4c~~	Asm Sp-KK		
								3c;			
								3c;			
0	2"							5c;	Nova Cyg 92	7200 Å 004 MAX Hα AIRMASS = 2.75 @ 01:23	
										∴ 3000 km/sec	
										Hα Blue Absorption @ 6505 Å	
0								6c;		AIRMASS 2.23	
								3		Dome T = -5.3	
										CCD T still -161°C	
180		2.99 ✓	AOV n					7c;	Telluric Std.	AIRMASS 2.57 Dome T = -5.9°C	
365	2"	3.66 ✓	FOp	* This	OBS probably lost. (only 2500 bytes)			4c;	Asm Sp-KK	System Hang while attempting to write	

307

#3

Date 1992 MAR 17/18 Observers [KH] F.Ba. Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC04513 4521	FLATS x 9					03W	+20°	TUNG	7sec

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Cloud .....

Focus ..... .200 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... -6.2°C .. 67%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	Tilt set (.190) FOR Flats	60μ	Hd	4c:		MAX 42,400 ADU/pixel	
								All to Person = Worm			

309 Thurs - Fri pg #L

Emulsion Batches: .....

Date 1992 MARCH 19/20 Observers [KK] [Br] [Tn] "SC" ← look here! .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce04522	BIAS(4)	using	<< BIAS.BAT						
4523	Comp							ThAr	1sec
4524	HD34029	05 09 18	+45 54	20 05	20 06	02 23 19 W			
4525	Comp								1sec
4526	HD34029	05 09 18	+45 54	2019	20 23	02 41 W			
4527	Comp							ThAr	1sec
4528	HD34029	05 09 18	+45 54	20 34	20 37 20	02 55 W			
4529	Comp							ThAr	1sec
4530	Comp							ThAr	1s.
4531	HD47105	06 31.9	+16 29 00	20 58	21 18	02 15 W			
4532	Comp							ThAr	1s.
4533	Comp							ThAr	1s.
4534	HD87901	10 03 03	12 27 00	21 26 20	21 41	0 53 E			
4535	Comp							ThAr	1s.
4536	Bias (4)								

Spectr. Temp. ..... Dome Temp./Hum. -2.1 50% Transparency Conditions ..... Fine .....

Focus ..... .200 ..... should be fine Refer to previous nights tests.

Spectr. Temp. ..... Dome Temp./Hum. .....

30 CGAin T → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echell CCD	7600Å x = 480 set		Echelle	grating = 19.50		Dome T = -1.8°C	
					width	60u	8807Å				
					Height	600u					
1000		B 0.89	G8 III +F?						Asm Sp-KK	MAX 3500 ADU	
2000									Asm Sp-KK	MAX 6900 ADU	
										Problems with PC/DV?	
3300									Asm Sp-KK	SC did this exp no DV, shows other CCD3 version.	
2165		B 1.9	A0 IV						Asm Sp-KK	Dome T = -2.3°C 4200 ADU MAX	Hd ?
2930		V 1.36	B7 V						TELLURIC STD.	Dome T: -2.7°C	

#2

Date ...92 Mar 19/20..... Observers ..EKK3..Fbr/Tn/SC..

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4537	Comp							ThAr	2s
4538	HD 62509	07 39 12	28 16 00	21 54	21 58	01 47 W			
4539	Comp							ThAr	2sec
4540	Comp							"	2sec
4541	HD 95689	10 57 36	+62 17 00	22 31	22 40	00 49 E			
4542	Comp							ThAr	2sec
4543	BIAS(4)								
4544	Comp							ThAr	2sec
4545	HD 8890	01 22 36	+88 46	23 00	23 20	8 48 W			
4546	Comp							ThAr	2sec
4547	HD 8890	01 22 36	+88 46	23 21	23 38	9 05 W			
4548	Comp							ThAr	2sec
4549	Comp							ThAr	2s
4550	HD 137909	15 23 42	+29 27	23 58 30	00 44	03 09 E			
4551	Comp							ThHr	5sec
4552	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. -3°C ... 50% Transparency Conditions ... FINE ...

Focus ... 200 ...

Spectr. Temp. ..... Dome Temp./Hum. .....

Topup at 22:15

30 CCDIN 1000 TSCALS

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	7600Å x grating = 480 set width / Length	60u / 600u					
2100	2"	V 1.14	KoIIIb				8807Å	7ci	STANDARD VELOCITY		
2500	2"	V 1.79	KoIIIa					~~7ci~~	KK pgm	4700ADU MAX	
2400		V 2	F					5ci	KK pgm.	4000 Adu max	
2500		V 2	F					6ci	KK PROG.	4600 Adu max	
720	3"	V 3.66	FOp					4ci	KK pgm	1500 ADU MAX	

318 pg #3

Date 1992 MAR 19/20 Observers (KH) TG/FBT

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce0453	Comp Nova Cyg 92	[redacted]		01 28		E		ThAr	2sec
4554	Nova Cyg 92	202743	52 17 39	01 28	01 58	-65728			
4555	Comp.							ThAr	2sec
4556 4564	FLATS x9					01 00E	+5235	TUNG	7sec
ce04565	BIAS (4)							TUNG	7sec
4566	1 FLAT.								

Spectr. Temp
Focus ...
Spectr. Temp
Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ~46°C 68% Transparency Conditions ... some cloud .....

Focus ... 700 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 C GAin

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	7600Å Hieght 205	60u	8807Å				2nd order from top
0	3"							4ci	Nova Pam.	CENT. ON 8807Å DOME T = -42°C	900 adu max
					width 60u Hieght 190		8807Å	3ci		10 IT ADU max	
					[Slit Hieght 190 = 750u]		6567 Hα				
		All to Perseus & WORM. BUT, DOS services may have failed by sending All wildcarded files to G:\ instead of G:\92-B dir									

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(SAT/SUN) pg#1

Date .. MAR 21/22 - 1992 .... Observers .. E.K.K./T./F.Hr.....

Emulsion Batches:

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Using CCD2A again .....R.G.610 filter in

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04567	BIAS(4)	using changed BIAS.BAT			20	07.20W			
4568	Comp							Th Ar	4sec
4569	HD 34029	05 09 18	45 54	20 02 30	2009	0234 W	~~07 34~~		
4570	Comp							Th Ar	4sec
4571	Comp							Th Ar	4sec
4572	HD 47105	06 31 54	16 29 00	2018	2118	02 22 W			
4573	Comp							Th Ar	4sec
4574	BIAS (4)								
4575	Comp				2100 secs edited			Th Ar	4sec
4576	HD 87901	10 03 03	12 27 00	2128	22 03	0023E			
4577	Comp							Th Ar	4sec
4578	Comp							Th Ar	4sec
4579	HD 62509	07 39 12	28 16 00	221300	22 27	02 24W			
4580	Comp							Th Ar	4sec
4581	BIAS (4)								

Spectr. Temp. ..... Dome Temp./Hum. −3.8°C/+44.1% Transparency Conditions ...CLEAR.....
(1900hrs) 2200 HAZE

Focus ....200.....

Spectr. Temp. ..... Dome Temp./Hum. ..... *30 CGAIN CCD T -> -100°C Echelle Tilt = 19.50

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	7600 x Tilt = .470 Tilt = [redacted]	60μ 600μ Height	8807A			* 270 0 170 1024 41 coadfmt	
		B							/		
3360		B 0.89	G8III HF?					4ci	Asm Sp-KK	* 8000 ADU MAX * 4 ORDERS after windowing	
									9090Å center of Bottom [redacted] ORDER	8807 center 2nd order from TOP. 8945 center of [redacted] 3RD 8665 Å center TOP ORDER	
2550		B 1.9	AO III					~~5ci~~	AstroSp KK.	Dome T = -5.6°C 4700 Adu max	
2500	4"	V 1.36	B7 V					5ci	Telluric Std	Dome T = -6.3°C 3000 Max ADU WEATHER ⇒ THICK HAZE!!	
									Not Bottom (A_0) 2 ORDERS have 10's of Telluric LINES.		
2000		V 1.04	K0 IIIb					6ci	Std. Velocity	Dome T = -6.4°C / Hum. [illegible]	

317 Pg #2

Date .. MAR 21/22-1992 Observers .EKK.J.Tn/F.Br.....

DBLE #2

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 4582	Comp							ThAr	4sec
4583	HD95689	10 57 36	62 17 00	22 36 30	22 58	23 30 E	61 50 33		
4584	Comp							ThAr	4sec
4585	Comp							ThAr	4sec
4586	HD 8890	01 22 36	+88 46	23 23 30	00 03 30	9 35 50 W	89 11 39		
4587	Comp							ThAr	4sec
4588	BIAS (4)								
4589	Comp							ThAr	4sec
4590	HD137909	15 23 42	+29 27	00 16 30	01 17	02 27 E	29 9 36		
4591	Comp							ThAr	4sec
4592	BIAS (4)								
CCD 4593 CCD 4601	FLATS (x9)				01 50	04 W	+29°	Tung	

Spectr. Temp. ..... Dome Temp./Hum. −6.8°C/48.4% Transparency Conditions . CLEAR (LIGHT HAZE) 31

Focus .....0.200.....

IL> 20120 → CLOUD; HAZE

Spectr. Temp. ..... Dome Temp./Hum. .....

30 CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	7600 X TILT = 0.47	60μ 600μ H	8807Å				
3800	4"	V 1.79	KOIIIa					7ci	KK Proc.	DOME T = −6.8°C 3400 ADU MAX	
2250	3"	V 2	F					8ci	KK Pam.	DOME T = −7.3°C 3000 ADU MAX PC TIME was slow = 1min Reset PC TIME @ 23:26	
										DOME T = −7.4°C	
62	3"	V 3.66	FOp					9ci	KK pgm	DOME T = −7.5°C VERY HAZY 400 ADU MAX (410)	
					slit height 2800μ ∴ = .185			3ci		8300 ADU MAX	

319

pg#1 non Tues

Date 1992 MAR 23/24 Observers [K.K.] T.H.

using CCD2A program

Emulsion Batches: .....

.....

No Filter

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce04602	BIAS(4)		0	0 256	1024 4 1	CCD FMT			
ce04603	Comp				540secs			ThAr	5sec
ce04604	HD34029	05 09 18	+45 54	19 49	19 58	07 21 W	-27.1485		
4605	Comp							ThAr	5sec
4606	HD34029	05 09 18	+45 54	20 03	20 14	02 37 W	-27.1596		
4607	Comp							ThAr	5sec
4608	BIAS(4)								
4609	Comp							ThAr	5sec
4610	HD47105	06 31 54	+16 29	20 28 20	2040secs 21 02 20	02 15 W	-29.6411		
4611	Comp							ThAr	5sec
4612	HD47105	06 31 54	+16 29	21 15	21 50	03 03 W	-29.6867		
4613	Comp							ThAr	5sec
4614	BIAS(4)								
4615	Comp							ThAr	5sec
4616	HD62509	07 39 17	+28 16	21 57 20	22 07 20	07 12 W	-27.9581		
4617	Comp							ThAr	5sec

Spectr. Temp. ..... Dome Temp./Hum. -3°C .....73% Transparency Conditions ... sl. hazy 320

Focus ....235.... (FWHM looks better than 3 pixels) clearing by sundown

Spectr. Temp. ..... Dome Temp./Hum. Cradle grating Tilt = 18490 / 30 CGAIN KCOT → 100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD	600 l/mm 5000Å Blaze .455	60µ 500µ	sitting dts for	stellar	700s for flats	Dome T = -3.3°C 500 = .215 set 173/16 now	
7000		B 0.89	G8 III + F?				4481/R	2c:	Kk pgm	some cloud now × 6th ORDER from TOP 2300 HOW MAX	
									(4574-76 lost)	4573Å at Red end of 5th ORDER from TOP	
19,500								7c		4577Å at Blue end of 4th. 9 K MAX HOW CLOUD now	
										(4680Å Red Limit of Range)	
										Dome T = -4.0°C	
11,850	2"	B 1.9	A0 IV					~~5c~~	Kk pgm	×PC hung up a bit at 6th Apx 11 4X Read out after restoring 2 21 10 s	
11,800	2"	B 1.9	A0 IV					~~5c~~	Kk pgm		
										Dome T = -5.0°C	
9000	2"	V 1.14	K0 III-5					5c	Std Lel	3000 MAX HOW	

321 pg #2 Mon / Tues

Emulsion Batches:

Date 1992 MAR 23/24 Observers [illegible] T.H.

still No. Filter at coarse

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
c0046 18	Comp							Th Ar	5sec
4619	HD 8890	01 22 36	+88 46	22 16 45	22 46 45	08 29 W			
4620	Comp							Th Ar	5sec
4621	HD 8890	01 22 36	+88 46	22 51	23 12	08 54 W			
4622	Comp							Th Ar	5sec
4623	BIAS (4)								
4624 4632	FLATS x 9			23 50		01 W	+20°	TUNG	150 sec
4633 4634	Focus Test	inboard / outboard		00 30		W	+20°	Th Ar	5/5

Spectr. Temp. ..... Dome Temp./Hum. ~5.1°C ..80% Transparency Conditions ..sl. Hazy.....

Focus ...235..... looks good for sl higher Temp - based on focus test.

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	x Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm 5000 Blaze	60μ = .277 500μ H	4481 A				
9750	2"	2	F					6c i	kk pgm	4700 A04 MAX	
6980	2"	2	F					7c i	kk pgm		
								2c i			
										Dome T = -4.8°C	
(Longer exps now because of Diffuser instalatn)						60μ wid/th 700μ H = .195 FOR 17 sets				8600 MAX ADU	
Set .235 T=-4.8°C					600 l/mm 5000 Å Blaze	60μ 700μ H	4481 A	8c i 9c i		CCD Fmt 300 0 64 1024 S 1 OUTBOARD = 2 pixels Blue	
					All to PERSEUS and WORK after some edits						

323

pg #2 Tues-Wed

Date 1992 MAR 24/25 Observers [K.K.] J.n. S.C.

Emulsion Batches:

No Filters used tonight

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce 04635									
ce 4636	Focus Test	inboard/outboard	Max Timum posns			2:33 W	+18°	Th Ar	5/5
4637	" "	"	"	"				"	"
4638									
4639	BIAS(4)	using	<< BIAS4.BAT						
4640	Comp							Th Ar	5sec
4641	HD 34029	05 09 18	+45 54	19 41	19 50	2 27 W			
4642	Comp							Th Ar	3sec
4643	HD 34029	05 09 18	+45 54	19 53 30	20 04				
4644	Comp							Th Ar	3sec
4645	HD 34029	05 09 18	+45 54	20 05 30	20 16	2 53 W			
4646	Comp							Th Ar	3sec
4647	BIAS(4)								
4648	Comp			~~20 24 40~~		W		Th Ar	3sec
4649	HD 47105	06 31 54	+16 29	20 24 45	2055	0211 W			
4650	Comp							Th Ar	3
4652	HD 47105	"	"	20 58 45	21 31	0247 W			
4653 ~~4654~~	Comp							Th Ar	3

Spectr. Temp. ..... Dome Temp./Hum. −00.9°C. 46% Transparency Conditions .. hazy .....

Focus .. .228 FOR OBS. .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Set	.235	T=	~~G5~~ −0.4°C		600l/mm .455	60μ width 500μ height			outbound	300 0 64 102 81 ≙ .3 pixels Blue	
	.228	T=	−0.5°C						outbound	v v sl Red	
				Echelle CCD			4481 R			0 256 1024 4 1 −00.9°C dome	
								3c;			
21,300	2"	B 0.89	G8III +F?					4c;	KK pgm	6000 MAX ADU	
								5c;	"		
21,600	2"							5c			
21900								6c			
										Dome T = −2.0°C	
11,770	<2"	B 1.09	A0 IV					7c	KK pgm	4000 MAX ADU	
10000	2"							7c; 8;	~~Normalizing to~~ ~~standard~~		

325

pg #2 Tues-Wed

Date 1992 MAR 24/25 Observers [KK] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCD4654	Comp			3"				ThAr	3sec
4655	HD62509	07 39 02	+28 16	21 37 45	21 45	01 54 W			
4656	Comp							ThAr	3sec
4657	Comp							ThAr	3sec
* 4658	HD8890	01 22 36	+88 46	21 55	22 25	08 10 W			
4659	BIAS(4)								
~~4660~~	~~Comp~~							ThAr	3sec
4660	HD8890	01 22 36	+88 46	22 29 30	22 59 30	08 45 W			
4661	Comp							ThAr	3sec
4662	BIAS(4)	after Reboot		23 24					
4663	Comp							ThAr	3sec
4664	HD124897	14 11 06	+19 42 00	23 31	23 37	2 44 E			
4665	Comp							ThAr	3sec
4666	Comp							ThAr	3sec
4667	HD137909	15 23 42	+29 27	00 25 20	00 43	3 50 E			

Spectr. Temp. ..... Dome Temp./Hum. -2.0°C 58% Transparency Conditions . hazy..moreso.....

Focus ...: 228.....

Spectr. Temp. ..... Dome Temp./Hum. ..... 4297Å = start

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD	600 l/mm	60u 500u	Hiesight				
5000	2"	V 1.14	K0IIIb					5ci	Std Vel	* Numbering got out related to past unwritten ccd 4650	
										It was written: 2132	
7880	2"	2	F					6ci	Kkpgm	3100 ADU MAX Tel Reversal ie through 90°	
										Dome T = -23°C	
9000	2"	2	F					7ci	Kkpgm		
				Had To Reboot PC & RESTART CCD3					echelle	Dome T = -26°C	
9900		B 1.2	K5III Fe-0.5					2ci	Std Vel	3700 MAX ADU	
								3ci:		After Top up	
1000	2-3"	V 3.66	F0p					4ci	Kkpgm	Some cloud - Thick at end	

327 pg#3

Emulsion Batches:

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Date .1997 MAR 24/25.. Observers ..TH...[MK].checking..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCD4668	Comp after HD137909							ThAr	3sec
4669	BIAS(4)								
4670 4678	FLATS x 9			00 50				TUNG	150sec
4679	BIAS(4)								
4680	DARK	using	600 DARK	command	01 41				600sec

Spectr. Temp. ..... Dome Temp./Hum. -2.9°C 53% Transparency Conditions ... Clouding in.....

Focus ... 2.28 still.....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLOSED

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle CCD	600 l/mm 5000Å Blaze	60u 500u H	4481Å				
										Dome T = -3.0°C	
						700u H = .195sec		2ci		10 K max for 150secs	
										Dome T = -3.0C	
								1ci			
					All to	WORM	&	PERSEUS.			

329 pg #1

Thurs - Fri

Date 1.9.92. APR 2/3..... Observers .[B.m.]...T.h.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCO6016	BIAS(4)	using <<BIAS4.BAT		19 22					
6017 6018	Focus Test			19 45		03 26W	+36 46	FeAr clear	30/2
6019	Comp				1320secs			"	90sec
6020	HD30282	04 41 05	+36 3236	19 56	20 18	04 00W			
6021 ✓	Comp (also a second one written CCO 6022 Fts. (usable but an accident)							FeAr Clear	90sec
6023	BIAS(4)								
6024	Comp	using 90 comp command - OBJ set to "FeAr" only							90sec
6025	HD44990	06 19.8	+07 08	20 37 30	960secs 20 53 30	01 58W			
6026	Comp							FeAr clear	90sec
6027	Comp			21 03				"	"
6028	HD87901	10 03 03	+12 27	21 06	21 07	00 31 E			
6029	Comp								
6030	BIAS(4)								
6031	Comp							FeAr Clear	90sec
6032	HD90861	10 24 17	+29 05 35	21 31	21 42	~~00 39E~~			
6033	Comp							FeAr Clear	90sec

Spectr. Temp. ..... Dome Temp./Hum. -1.9°C 62% Transparency Conditions ... O.K some cloud ... 330

Focus ... 6.85 ... all night ...

Spectr. Temp. ..... Dome Temp./Hum. ..... (FOR Stellar) 480 0 50 1024 4 1 CCOFmT

90 C.G Hin FAMSON as usual

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD		200μ Full Length				Stellar VSI Real	
	T = -2.2°C				G=5930 1800 ln/mm		6450Å	3c; 4c;	focus test Fm +360 0 1 0 1024 40 1	CCOFmT	
								~~5c~~			
3500	4"	B 7.9-8.8	F6 -G2					6c;	Rm pgm	2-3 k pictures 6200 ADU Saturated clear sky!	
								1c;		Dome T = -2.7°C	
								5c.			
5300		B 6.5-8.0	F7Ib -K1Iab					7c.	Rm pgm		
34000		V 1.36	B7V					8c.	Telluric Std	8500 max ADU	
										Dome T = -3.0°C	
2900	~~4-8~~"	V 6.6	sg K1					9c.	Std vel		

331

pg #2

Date 1.9.92. HPR. 2/3..... Observers [Rm]. Jh...S.C...MKI...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Fm0042A B,C,D	HD90861	10 24 17	+29 05 35		21 44	00 15 E	"Nimate	Red/ Forgot Int	Time 1/15 set
cc06034	Jupiter			22 08 00	22 10	00 05 W			
6035	Comp							FeAr clear	90sec
6036	BIAS(4)								
6037	Comp							FeAr clear	90sec
6038	HD62509	07 39 12	+28 16	22 28 30	22 29 20	03 14 W			
6039	Comp							FeAr clear	90sec
6040	Comp			900secs				"	"
6041	HD114762	13 07 30	+18 02	22 42 45	22 57 45	01 45 E			
6042	Comp							FeAr clear	90s
Fm 425 A,B,C,D	HD103095	11 47 13	+38 26 10	23 12		00 09 E		Int 1/15 67 msec	sec
6043	Comp								
6044	HD103095	11 47 13	+38 26 10	23 26	23 38	00 14 W			
6045	Comp								
6046	BIAS(4)			23 41					

Spectr. Temp. ..... Dome Temp./Hum. -3.2°C 68% Transparency Conditions ..... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4 frames	5"	V 6·26	Dome SW Medium NW	CASS CCD	Wind	200u Full length	g+l over Right of view		Seeing test	Furs on as they stand	Like
OFF						"	6450Å	10ci	Good Demo FOR VISITORS	11K ADU MAX	
										Dome T = -3.2°C	
								5ci			
36000		B 2+4	KOMP		1800l/mm G-5930			11ci	std vel	13K max ADU	
2420	4-6"	V 7·31	dF7					12ci	std vel		
4 frames	4"	V 6·45	G8V p					13ci	Seeing test	Dome SW STR WNW wind	
3900	3"	V 6·45	G8V p					13ci	std vel		
								11ci		Dome T = -3.3°C	
								1ci			

Pg #3

Date 1992 Apr 21/3 Observers [illegible] T.H. S.C.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
6047 CC06049	FLATS x3			23 48		00 30W	+38°	TUNG Clear	5sec
6050	Comp							FeAr Clear	90sec
6051	Nova Cyg 92	20 27 43	+52 17 39	00 03 30	00 18 30	0742E			890sec
6052	"			0024		727E			600sec
6053	Comp							FeAr Clear	90sec
6054	BIAS(4)			0047					
6055	Comp	Ha (λ changed here)		0050				FeAr Clear	90sec
6056	Nova Cyg 92	20 27 43	+52 17 39	00 52 30	0100	700E			
6057	"	"	"	01 03 40	01 18 30	642E			900sec
6058	Comp							FeAr Clear	90sec
6059	BIAS(4)								
6060 6068	FLATS x9	using	(Repeat 3F lgts, Bgt 9 sp)					TUNG Clear	5sec
6069	Comp							FeAr Clear	90sec
6070	Nova Cyg 92	20 27 43	+52 17 39	01 44 30	01 55	605E			
6071	Comp							FeAr Clear	90sec

Spectr. Temp. ..... Dome Temp./Hum. -3.3°C 72% Transparency Conditions .. PART. cloudy → hazy 334

Focus ... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. -3.6°C 74% 90CGAIN till CC6055

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800 l/mm	200μ FULL	6450Å	14i		10K max ADU	
1000	6"						6450Å	15i	Nova pgm	13K ADU at Redest max	
822								16i		8K ADU max	
					1800 l/mm G=5930					Dew T = -3.4°C	
					1800/56° G=6000		6550Å			30Cgain	
900					"			17i		AIR MASS 2.3 6023 ADU MAX	
1330	6"				"			18i			
					"						
								~~19i~~		Dew T = -3.6°C	
								19i		7400 ADU MAX	
								5i			
										(1.96 AIRMASS)	
600								20i		Clouds OUT	
										∴ no Telluric for Tau Eridani tonight previous night 12/13	
		(TO WORK next day after scredits)						All	TO PERSEUS		

335 SAT / SUN pg 1 of 2

Date 1992 APR 4/5 Observers [mhi] [Rm] TA SC

Emulsion Batches:
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.....
..... Diffuser in as normal

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD6072 CCD6073	Focus					00 15W	+28°	FeAr Clear	30/30
6074	BIAS(4)								
6075	Comp			19 28				FeAr Clear	30sec
6076	HD62509	07 39 12	+28 16	19 31 30	19 37 30	00 14W			
6077	Comp							FeAr Clear	30
6078	Comp							"	"
6079	MWC 560	07 21 01	-07 32 12	19 48	20 18	01 30 W			
6080	Comp							FeAr Clear	30s
6081	BIAS(4)					01 33W	-7° 41'		
→ 6082 6084	FLATS x3	using	3FLATSB.BAT					TUNG Clear	20sec
6085	Comp at	6450Å						FeAr Clear	90sec
6086	HD30782	04 41 05	+36 32 36	20 36 30	21 16 30	05 06W			1400sec
6087	Comp							FeAr Clear	90sec
6088	Comp							"	90
6089	HD44990	06 19 48	+07 08	21 27 25	21 52 30	04 06W			
6090	Comp						FeAr	ETG	90s

Spectr. Temp. ..... Dome Temp./Hum. +20°C 54% Transparency Conditions ... Fine .....

Focus .. 6.85 ..... All night ...

Spectr. Temp. ..... Dome Temp./Hum. .....

≤83-2403 kt

CCDT → -100°C 90 CCGAin to start

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
T=	2.0°C	set= 6.85		CASS CCD	G=4760 1800l/mm	200u Full Length	4845Å	3ci 4ci	(360 0 10 1024	401) CCOFmt for Focus Right on	
								~~1ci~~		Dome T = +1.9°C	
								~~5ci~~	45img 480	0 50 1024 4 1 CCOFmt	
42006	good	B 2.14	KOIIIb					6ci	stdvel	10 K max	
								5ci			
								~~3ci~~			
425	4"	≈9						8ci	mki pgm		
								7ci			
								1ci		+00.7°C Dome T	
							4845Å	19ci		7500 ADU MAX	
					G 5430 1800l/mm		6450Å	~~9ci~~			
4,100	3"-6"	B 79-88	F6 -G1					9ci	Rm pgm		
								~~7ci~~			
600	4"	B G5-80	F7Iab -K1Iab					10ci	Rm pgm		

337

Pg #2 [RM]

Date 1992 Apr. 4/5 Observers Th SC

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC06091	Comp							FeAr Clear	90sec
6092	HD62509	07 39 12	+28 16	22 02 30	22 03 20	2 56 W			
6093	Comp							FeAr Clear	90sec
6094	Comp							"	"
6095	HD 103095	11 47 13	+38 26 10	22 21 30	22 36 30	0 39 E			
6096	Comp							FeAr Clear	90sec
Fm ABCD 426	HD103095	11 47 13	+38 26 10	22 50		0 25 E	"N" mode	67msec integration	
6097	BIAS(4)								
6098	Comp							FeAr Comp	90sec
6099	HD87901	10 03 03	+17 27	23 03	23 04				
6100	Comp								
6101 6103	FLATS x3	using	[Repeat 3 FLATS, B/AT 3]					TUNG Clear	5sec
6104	Comp							FeAr Comp	90sec
6105	HD ~~103095~~ 87901	10 03 03	+12 27	23 26	23 29 30	0 58 W			
6106	Comp							FeAr	90sec

Spectr. Temp. ..... Dome Temp./Hum. -00.2°C 63% Transparency Conditions ... Sl. hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

FANS on since 1830

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5430 1800/mm	200μ Full	6450Å	~~7c~~ i			
35000	3"							11c i	std vel	AIRMASS = 1.28 guided. 11k MAX	
								(7c i)			
								5c i			
8200	3"							12c i	std vel	(That v high proper motion star)	
80 3								(5c i)			
31×39	3"								Seeing Test	medium N to wind Dome ~~E~~ SW	
								~~13c~~ i		Dome T = -00.3°C	
								13c i			
35000		✓ 1.36	B7 V					14c i	Telluric Std	guided. 5000 MAX HOW	
								19c i		17,400 MAX	
					G=6000 1800/mm	200μ	6550Å	~~20c~~ i		90 CGAIN for comp?	
55000	CGAIN = 30 now.							21c i	Telluric Std	1.32 AIRMASS	
								20c i			

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pg # 3

Date 1992 APR 4/5 Observers [illegible] JH SC

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
cco 6107	BIAS(4)								
CCO 6108	Comp							FeAr Clear	90s
6109	NOVA Cyg 92	20 27 43	+52 17 39	23 58	00 20	-07 33 E			
6110	"	"	"	00 23	00 43	07 10 E			
6111	Comp							FeAr Clear	90s
6112 6114	FLATS x3	Repeat 3FLATS.BAT						TUNG Clear	5s
6115	BIAS(4)								
* 6116	Comp at H beta		(* Comparison exit)					FeAr Clear	40s
6117	NOVA Cyg 92	20 27 43	+52 17 39	00 57	01 03	06 50 E			
6118	"	"	"	01 05 45	01 35 45				180
6119	Comp							FeAr Clear	40s
6120 6122	FLATS x3							TUNG Clear	40s
6123	BIAS(4)				14x sec				
6124	Nova Cyg 92			01 48 36	02 08 30	05 45 E			
6105	Comp							FeAr Clear	40s

Spectr. Temp. ..... Dome Temp./Hum. ~00.7° 66% Transparency Conditions .. Hazy ... part cloudy .. 340

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 C GAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6000 1800 l/mm	209μ Full Length	6550Å				
								20ci			
450	6"							22	Nova pgm	1700 MAX ADU AIR MASS = 2.7	
1220	4"6"							23.	"	(5000 ADU MAX)	
								24i		7100 ADU MAX	
					G 4760 1800 l/mm		4845Å	25ci		St. 11 30 C GAIN	
920	4"6"							26ci	Nova pgm	MAX 546 ADU	
5800								27i.	"	MAX 2000 ADU	
								28ci		8400 ADU MAX	
										DOME T = -1°C	
5160	4"				G 4650 1800 l/mm		=4640Å ~~4580Å~~	29ci	Nova		
							"				
							"				

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Emulsion Batches:

Date 1992 Apr 4/5 Observers TH SC

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
cc 6126	Nova Cyg 92			0219	0232	E			13 min
6127	Comp							Fe Ar Clear	
6128	BIAS (4)								
6129 6131	FLATS x 3							Tung Clear	50 sec

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -1.3°C ~~61%~~ Actual central λ 30 CGAin

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3560				CASS CCD	G=4650 1800/m/m	300	4640Å	30c!	str	emission at 4685 Å?	
~~3560~~								31c!	This comp noticed to be del. next night. (missing pixels)?		
										close up noise? Runs off image	
								32c!		5500 ADU max	
					All to	Perseus	c	worm			

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pg #1 Sun/Mon

Date 1992 Apr 5/6 Observers [Rm] Tn ... mki checking in

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 6132 6133	Focus Test	Comp / Stellar Hartman			1920	00 10W	+28°	FeAr Clear	90/7
6134	BIAS(4)			1925					
6135	Comp							FeAr Clear	90sec
6136	HD62509	07 39 12	+28 16	1935	1935 30	00 31W	~~00~~		30sec
6137	Comp							FeAr Clear	90sec
6138	Comp							"	"
6139	HD29260	04 31.4	+18 20	1946	20 06	04 10 W			
6140	Comp							FeAr Clear	90s
6141	Comp							"	"
6142	HD 30282	04 41 05	+36 32 36	20 14 30	20 44 30	04 38 W			
6143	Comp							FeAr Clear	90s
6144	BIAS(4)								
6145	Comp			(1320 sec)				FeAr Clear	90sec
6146	HD44990	06 19 46	+07 08	20 53 40	21 15 40	03 32W			22min
6147	Comp							FeAr Clear	90sec

Spectr. Temp. ..... Dome Temp./Hum. +2°C 51% Transparency Conditions .thin. cloudy. st.dks.....

Focus .6.45..... unchanged

Spectr. Temp. ..... Dome Temp./Hum. ..... central

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	T=+1.9°C			CASS CCD	G-5430 1800 l/mm	200μ Full2	6450Å			Stellar Red 3pixel 670-685 nm plot	
										Dome T= +1.9°C	
2x 2,000		B 2.14	K0 III b					~~5c~~ 5ci	st.vel	fustguided 6K max	
								~~5c~~			
7000	4"	B 7.13-7.74	F5 Ib - F9.5 Ib					6ci	Rm pgm	4220 HPD max	
								~~7ci~~			
								~~7c~~			
3800	2-4"	B 7.9-8.8						8ci	Rm pgm	some cloud	
										Dome T= +00.5°C	
		B 6.5-8.0	F7 Iab - K2 Iab								
6500	4"	"	"					9ci	Rm pgm	17K ADU solid AVG clear bkgd for 8 columns.	
								7ci		∴ 69K photons @ 250/1 S/N	

345 pg#2

Emulsion Batches:

Date 1972 Apr. 5/6 Observers [Rm]...T...SC

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC06148	Comp							FeAr Clear	90sec
6149	HD90861	10 24 17	+29°05 35	21 27 40	21 41 00 (800 sec)	00 08 E			
FM00427	A B C D "	"	"	21 48		0000	4 frames		
6150	Comp							FeAr Clear	90sec
6151	Comp							FeAr Clear	90sec
6152	HD87901	10 03 03	+12 27	22 03	22 04	00 37W			
6153	Comp						Comp 6154	FeAr Clear	90sec
6155	HD62509	07 39 12	+28 16	22 20	22 2040	03 17W			40sec
6156	Comp							FeAr Clear	40
6157	BIAS(4)								
→ 6158 6160	FLATS x3			22 35		03 35W			
6161	Comp (edit)							FeAr Clear	90sec
6162	BM Coss	00 48 36	+63 33	22 52	23 22	11 07W			
6163	Comp							FeAr Clear	90sec
6164	Comp for Nova Cyg 72							"	"

Spectr. Temp. ..... Dome Temp./Hum. +00.4°C 57% Transparency Conditions ... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5930 1800 l/mm	200μ FULL	6450Å				
4500	4"	✓ 6.9	KOIII					10ci	Std vel ("Stow" Smith)		
47x47			Note - Found MKIII in 8mHertz mode			200μ Slit Full Length	Had to image Lower Right of Slit	~~7ci~~	Seeing Test	Dome SW gusty NW-ish Dim wind	
								~~9ci~~			
40000		✓ 1.36	BFn					7ci	Telluric Std	1.19 Airmass	
~~10000~~								11ci			
26000		B 2.14	KOIIIb					12ci	Std velocity MAX 6000ADU	windy Airmass 1.35 Fast guided	
								16ci			
								~~13ci~~		Dome T = 00°C	
								13ci		10K max	
					G=6000 1800 l/mm	200μ FULL	6550Å	~~14ci~~		Still 90 CGAIN	
2600	6"							15ci	MK: pgm	MAX 2000ADU of H2	
								~~14ci~~			
								14c			

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Date 1992 Apr. 5/6 ..... Observers T.n./S.C. .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD6165	Nova Cyg 92	20 27 43	+52 17 39	23 38	23 50	0800 E			
6166	Nova Cyg 92	"	"	23 57	0001			~~FeAr Clear~~	
6167	Comp							FeAr Clear	90s
6168	BIAS(4)			00 10					
6169	Nova Cyg 92	20 27 43	+52 17 39	00 12	00 17	07 31 E			
6170	Comp							FeAr Clear	90s
6171 6173	FLATS x3	(Repeat ~~6172~~ 3 FLATS.BAT		3)		07 20 E	+52°	TungClear	4sec
6174	BIAS(4)								
6175	Comp							FeAr Clear	90s
6176	HD 177724	19 00 49	+13 43	00 33 30	00 43 30	05 40 E			600sec
6172	Comp							FeAr Clear	90s
6178 6179	Focus Test	Comp/	Stellar Hartman		01 06	0 0	+25°	FeAr Clear	50/50
6180	DARK 10min			01 24		0 0	-25°		

Spectr. Temp. ..... Dome Temp./Hum. -00.3°C 58% Transparency Conditions . Fine .....

Focus ... 6.85 All right ....

Spectr. Temp. ..... Dome Temp./Hum. -00.5°C 58% (central)

90 CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
965	6"	7		CASS CCD	G=600 / 1800 l/mm	200μ FULL	6550Å	16c:	Prog pgm	8600 Å 0.4 pix Tel best to west side	
850					Tilt=~~56~~ 56°			17c:	"	AIR MASS 3.06	
								14c:			
										Dome T = -00.2°	
550	6"							15c:		No changes ~~Additions~~ same as last night too.	
								19c:		12 K MAX 400 pixel	
								~~20c:~~			
13600	10"	V 2.99	NOV m					20c:	Telluric Std	5.0 AIR MASS at start 3600 Å now much some cloud	
	T=	0.00°C				200μ FULL	6550Å	3c: 4c:	Focus test	360 Å to 1039 nm, CCD FAINT	
								2c:	(stellar)	V very slight Red < 0.2 pixels	
				(Tobvious cosmic Rays)							
				All To PERSEUS, but					UTs may be shifted before		
										working?	

349 pg #1

Mon - Tues

Date 1992 Apr 6/7 Observers [Rm] Fbr/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCO 6181 6182	Focus Test					0 0	+25°	FeAr Clear	40/40
6183	BIAS(4)								
6184	Comp							FeAr Clear	90sec
6185	HD 30282	04 41 05	+36 32 36	19 40	20 11	0411 W			
6186	Comp							FeAr Clear	90sec
6187	Comp							"	90sec
6188	HD 44990	06 19 48	07 08 00	20 26	20 56	0316 W	07 05 N		180sec
6189	Comp							FeAr Clear	90sec
6190	Comp							"	"
6191	HD 90861	10 24 17	29 05 35	21 08	21 23	2146 E	29 05		
6192	Comp							FeAr Clear	90sec
6193	BIAS(4)								
FM00428.fts	HD90861	06 19 48	07 08 00	~~21 57~~		00	67msec	Int	'N' min
6194	Comp							FeAr Clear	90
6195	HD 62509	07 39 12	+28 16	21 51	21 51 40	02 51 W			40sec
6196	Comp								90s

Spectr. Temp. ..... Dome Temp./Hum. +6.°C ....44% Transparency Conditions ..Hazy - p.m.t. cloudy.....

Focus ...6.75...changed from 6.85

Spectr. Temp. ..... Dome Temp./Hum. ..... (Cen tAlt)

FANS ON early

90 GAIN CCD T = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Set 6.75 T = +6.0°C				CASS CCD	G = 6000 1800/56°	200u FULL	6550Å	3ci 4ci	Focus Test	Right on (Relay)	
					G = 5430 1400 l/mm		6450Å				
					"		6450Å				
3400	4"-5"	B 7.9 -8.4	F6 -G1			6ci	"	6ci	Rm pgm	1720 ADU MAX	
5845	4"	B 6.5-8.0	F7 Lab -K1 Lab			7ci		7ci	Rm Pgm.	4960 ADU MAX	
		V 6.9	K2 III			8ci		8ci	Std Vel	Dome T = 4.8°C (49%) 3640 ADU max	
										Dome T = +4.4	
4 frames		V 6.9	K2 III			200u To Lower Right			Seeing Test	Dome SW with SE wind	
28K		V 2.14	K0 III b			9ci		9ci	Std Vel		

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Pg #2

Emulsion Batches:

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Date 1992 Apr 6/7 Observers [Rm] Fbr / JTG

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC06197	Comp								
6198	HD 89701	10 03 03	+12 27	22 04	22 05	0 41 58 W			
6199	Comp								
6200	DARK 90 min			22 25					120s
6201	BIAS (4)			23 19					
6202	FLAT }	using "	Repeat 3	FLATS, BAT	3 "	0 0	+75°	TUNG Clear	4 sec
6203	FLAT								
6204	FLAT. }								

Spectr. Temp. ..... Dome Temp./Hum. +4.1°C ... 52% Transparency Conditions .... clouding in .....

Focus .... 6.75 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5430 1800/mm	200u FULL	6450Å				
		✓									
10,000		1·36	B7n					10ci	Telluric Std		
								11ci			
										Dome T = +3.9°C	
								2ci		MAX 16 KADU	

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THURS-FRIDAY Pg #2

Date . APRIL 9/10 . 92 . . . Observers . . . KK / Tn / Fbr . . . . . .

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc06205	Focus (Comp)					≈ 0 0	≈ +25°	FeNe Comp	20s
6206	Focus (STEL)					0 0		"	20s
6207	BIAS (4)								
6208	Comp							CLEAR	FeNe 40s
6209	HD 95735	10 57 54	36 38 00	21 32	21 50	00 16 E			
6210	Comp							FeNe Clear	40sec
6211	Comp							"	"
6212	HD 112956	12 55 12 [redacted]	69 1900	22 0630	2243	-1 19. E			
6213	Comp							FeNe Clear	40s
6214	Comp		1900 Precessed					FeNe Clear	40s
6215	DM +66 717	11: 14 26 [redacted]	66 23 24 [redacted]	23 0530	0011	01 47 W			
6216	Comp							FeNe Clear	40s
6217	Comp							FeNe Clear	40s
6218	HD 124 752	14 10 18	68 03 00	00 2330	005330	00 22 E			
6219	Comp							FeNe Comp	40s

Spectr. Temp. ..... Dome Temp./Hum. 7.2°C/68% Transparency Conditions ..... CLEAR - hazy .....

Focus ..... 6.75 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CLambda 90 CGAIN T = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Set 6.75	T=	7.2°C		CASS CCD	G=4930 1800 ln/mm	300µ Full Length	5040Å	3ci	Focus test	Looks Right on.	
								4ci			
					G=4983 1800 ln/mm		5140Å			480 0 50 1024 4 1 coolant	
								5ci			
4500	3"-4"	V 7.60	~~mix~~ Mb0					6ci	KK Pam	DOME T = 6.8°C / HUM = 70% MAX 1500 ADU/pixel	
								5ci			
								5ci			
4000	2"-3"	B 8.75	dG6					7ci	KK Pam	DOME T = 6.4°C / HUM = 71.7% 2200 ADU MAX	
								5ci			
								5ci			
3350	2"	V 9.32	M2 I	new Field drawers clocked with BD chart				6ci	KK Pam	DOME T = 6.1°C / HUM = 72.4% → 74% 7500 ADU MAX = Saturation of 10 cols above Mgnd.	
		B						5ci			
	~~2"-4"~~	~~9.6~~	~~KO~~					5ci			
1670	3"-4"	B 9.6	KO					9ci	KK Pam	for 5 colours 2000 Sum Mg above Mgnd	
~~1670~~	~~3"-4"~~							5ci		9	
							Cont → Next Book				

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Emulsion Batches:

Date . April 9/10 Observers . KK/Tn/Fbr

Dome T = +5.3°C H. 60%

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
6220	BIAS(4)			00 58					
6221	Comp							FeNe Clear	40s
	HD 147379	16 16 36	67 28	01 06					